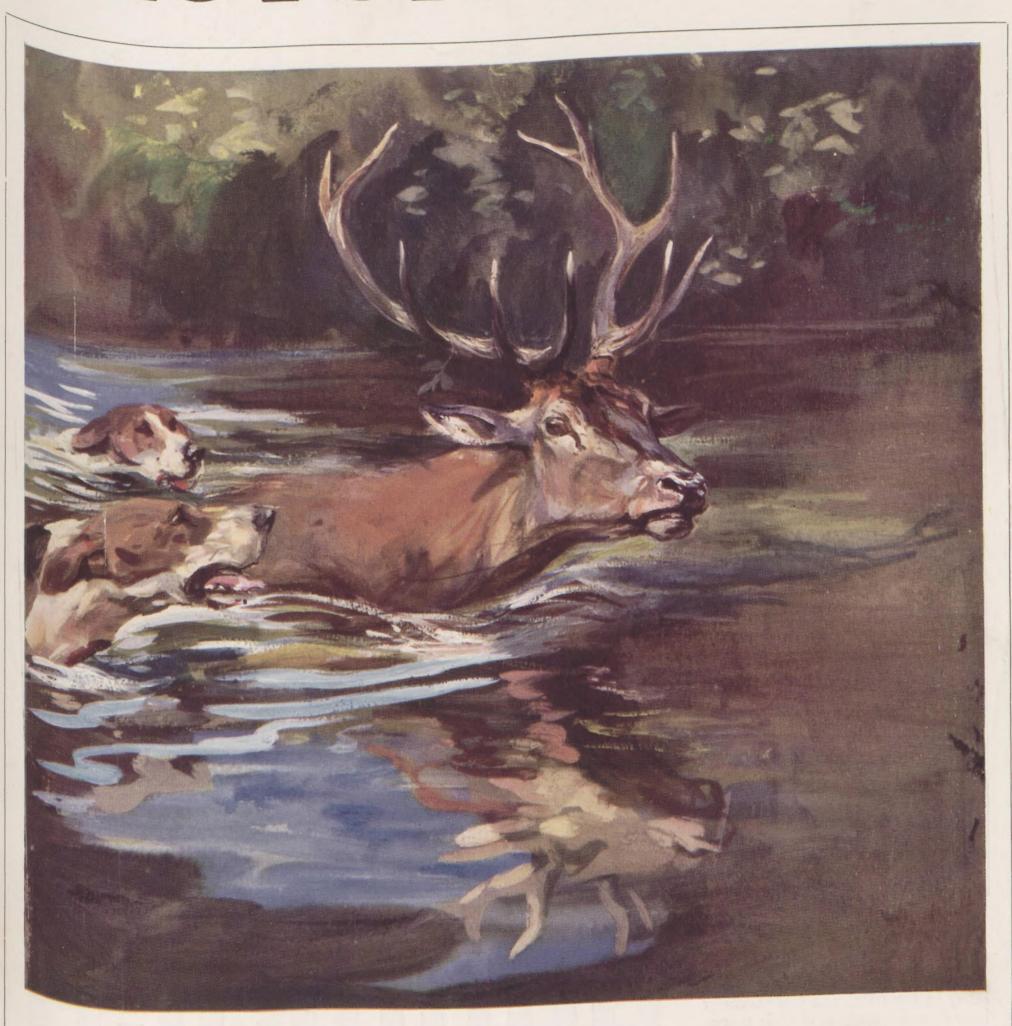
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The previous prices, for comparison, are inserted beneath the new.

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Notice also how the oil spray and vapour from the crank-case

Notice also how the oil spray and vapour from the crank-case lubricate the valve stems—a much-needed feature on other cars. The crank-case and breather holes are placed in the centre of the cylinder block, and allow the oil-laden vapour to escape after it passes the valve stems and the two gauze-covered openings shown. Add to its wonderful mechanical performance its Cantilever springing, its delightfully sensitive steering, its generous interior, ample passenger accommodation, and generally luxurious finish, and you are then appreciating but a few of the points which make the Enfield-Allday indisputably Britain's best light car.

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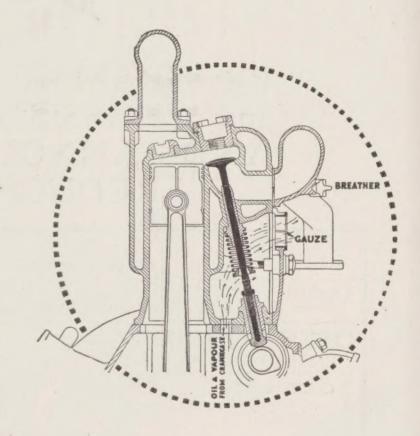
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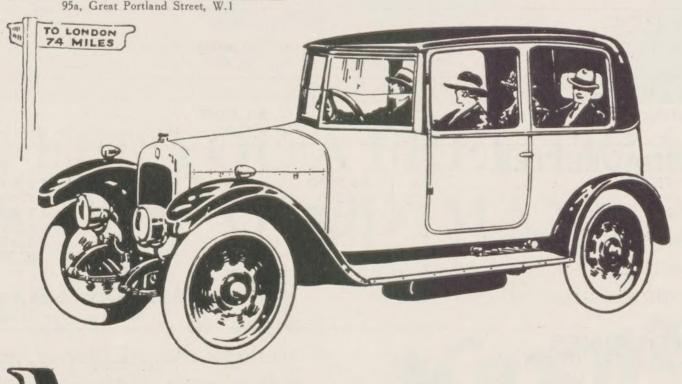
Saloon Body (as illustrated), with de luxe equipment ... £850 net at Works Standard Four Seater Touring Body, with complete equipment £575 net at Works

ENFIELD-ALLDAY MOTORS, LIMITED
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BIRMINGHAM

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Page





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WONDERFUL RECORD

TRELLI TYRES

THE WORLD'S BEST

were fitted to the Talbot-Darracq Cars which finished first, second and third in the Light Car Grand Prix at Le Mans, September 18th. Distance 280 miles. Winner's average speed 72 m.p.h.

PIRELLI'S 1921 VICTORIES

May 29th

The Targa Florio Race over the mountainous, muddy and difficult Madonie circuit in Sicily was won on a Pirelli-Tyred Car. Distance 270 miles. Average speed 36 m.p.h. Only 14 out of the 24 starters completed the race.

September 4th

The winner of The Italian Grand Prix at Brescia, raced to victory on Pirelli Tyres. His average speed of 90 m.p.h. over the 325 miles constitutes a World's Record. The second car was also Pirelli Tyred.

July 25th

Pirelli Tyres were fitted on the Cars which finished 2nd and 3rd in the French Motoring Grand Prix. They were the only set of tyres which remained unchanged throughout the race.

September 10th

The cyclists who arrived first and second in this race rode Harley-Davidson machines fitted with Pirelli Tyres. The distance of 200 miles was covered without change of tyres, at an average speed of 72 miles per hour.

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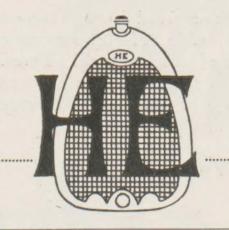
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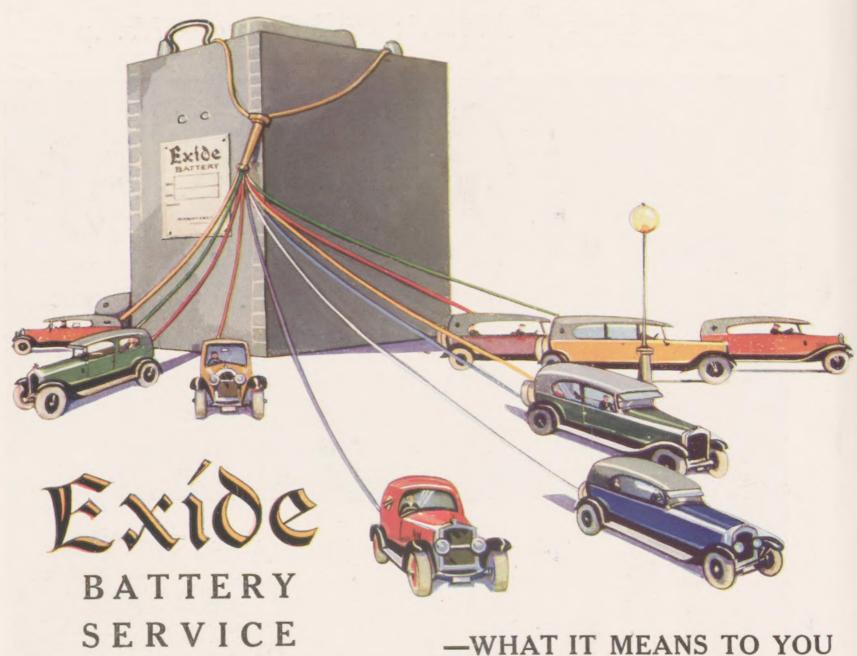
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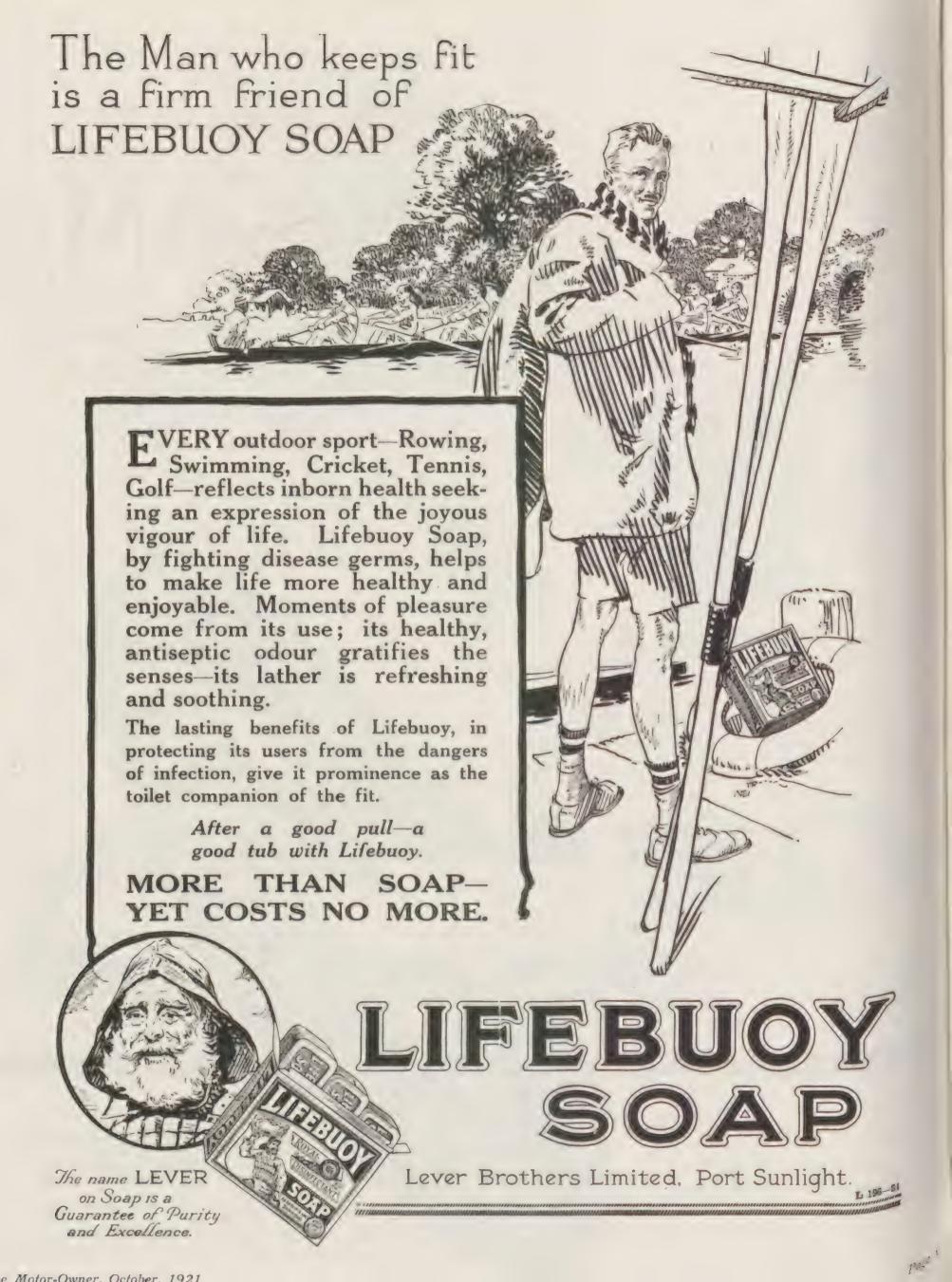
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Page xi



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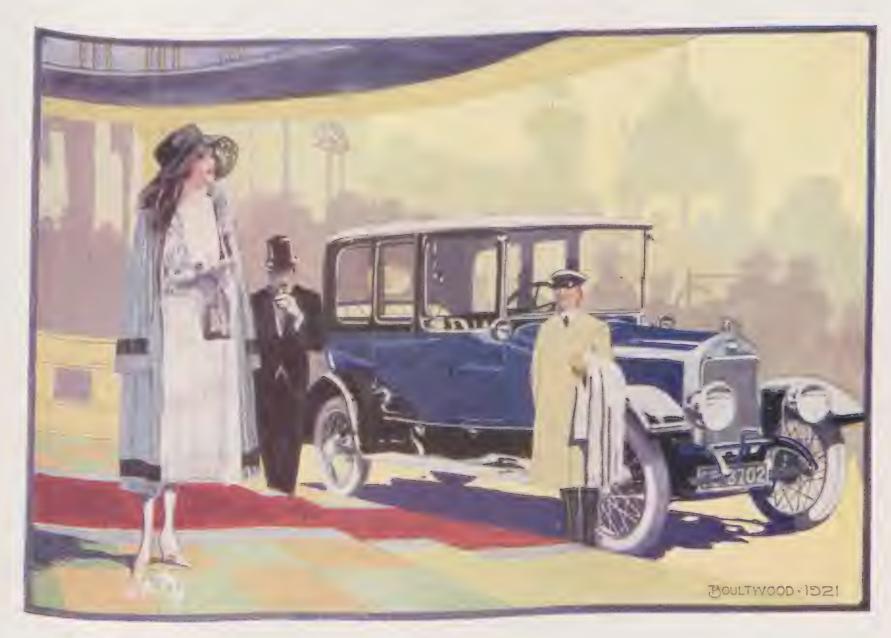
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THE PERIODICAL PUBLISHING COMPANY, LTD.

10 Henrietta Street, Covent Garden, LONDON, W.C.2

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"WOLSELEY" PROGRAMME for 1922

OWING to the forward state of our manufacturing operations, the "Wolseley" 1922 Season will commence on OCTOBER 1st, 1921. Several new types of carriages are being introduced, making the "Wolseley" range unique in its comprehensiveness.

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Prices for 1922 Season

THE "WOLSELEY" TEN

Chassis only Two-seater	(Specification A) (Specification B)	£475 £440	" (S Two-seater	pecification A) pecification B) Coupé(Fixed Head)	£525 £490 £650
"	Light Delive	ery Van		£400	

THE "WOLSELEY" FIFTEEN

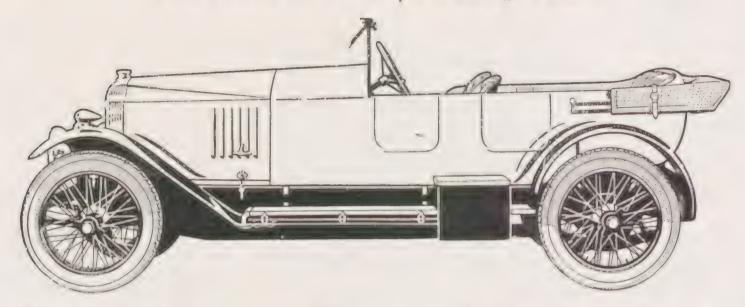
Chassis only	£615	Two-seater Coupé	 £995
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-the finest of sporting cars



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THE 30-98 h.p. Vauxhall-Velox is a genuine touring car, fitted with a beautifully finished body, and most

Far from being a racing car pure and simple, it is a car of the fullest refinement, pleasant to drive at *any* speed, and

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is the product of many years' study of the fast touring car as a special type. Built in relatively considerable numbers, it can

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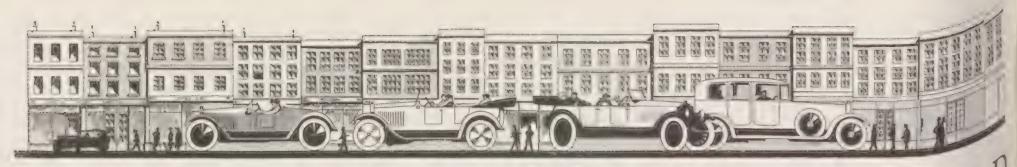
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NE can obtain in London—one makes the statement boldly—any car for any purpose, of any nationality, and at any price. Moreover, one can obtain that car after having inspected a variety of other similar but, maybe, less suitable vehicles without journeying above a mile.

The motor-car trade, unlike most other trades—although it is a usual and admirable custom of the East—has exhibited a striking gregariousness from the first. The principal motor manufacturing district has been, is, and will be, the Midlands; that, with a few exceptions, is where motor-cars are made. So with the retail branch of the industry. The principal selling district is Great Portland Street. There, with no exceptions, any car in existence may be obtained. Consequently, it is the Motor Market of the World.

This may seem a somewhat ambitious description to apply to Great Portland Street, or to London as a whole, but in the main it is accurate. The fact may be regarded as an achievement: an achievement of which the British nation should be proud. The history of motoring has been told too many times, and covers, besides, too short a period to need re-telling; but consider that less than three decades ago the British motor industry was non-existent. Progress at home, once the germ had developed, was legally discouraged, and France, Germany, and America were making-motor-cars which ran while we stood agape when one of those strange contraptions passed us in the street.

And then, suddenly, the British motor industry was born, and cars became a commonplace sight. Rude urchins had occasion to shout: "Git a 'orse!" for a while, but Great Britain, with a rapidity only counterbalanced by her slowness in starting, forged ahead until one had some excuse for saying that the best car was the British car. That was not altogether true then, and it is scarcely the fact now, for there is no such thing as a "best" car. There may be best types of cars for a variety of given purposes, and Britain has a selection of cars of each of those types which has nothing to fear in a comparison with the corresponding types of other nations.

So remarkably did our industry up for lost time in the early days perhaps our cars obtained a reputation beyond their actual beyond their actual intrinsic merits of pull incidentally, evidence incidentally, evidencing the value of placety! Paris natural licity! Paris naturally held the Web position of Motor Market of the while the Printed while the British infant was developing, it is long since that it is long since that glory has departed.

It is perhaps

It is, perhaps, more just to look and as a whole London as a whole rather than particular street particular street as the world's market for the T market, for the London headquarted many leading cars are not situated Great Portland Co Great Portland Street at all. Pall Mall its share in addition its share in addition to Long Acre; a fe dilly, and even Oxford Street, have a hroad while others are coast. while others are scattered as far abroad to Edmonton and Act Edmonton and Acton. But the is 1th mains that no matter where the car is no where the book or where the headquarters selling of tion is situated. tion is situated, the would-be purchast will find no difficulty will find no difficulty in inspecting, and buying a model of any make from portly the numerous agents. the numerous agents in Great Portla

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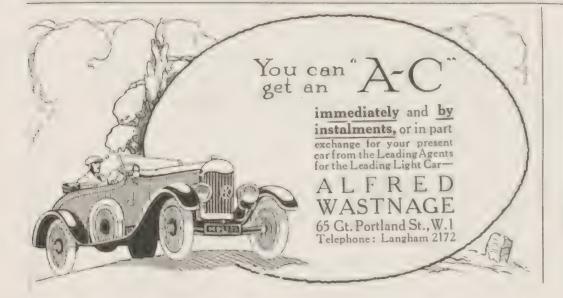
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See Page 3 of Cover.

Dunlop Magnum for Long Mileage



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ir Sirs,

I see in the "Post" this morning a record of mileage on your Magnum tyres. I think it will be satisfactory to you to know my experience.

I am driving a 25/30 H. P. Crossley Car, and have been testing the Magnum tyres as to mileage. I had two new tyres on the back wheels, and have actually recorded on my Speedometer 8,500 They have never been touched with a pump, and have retained their pressure all the way through. They look as if I should get up to 10,000 miles on them.

This is a pretty severe test on tyres where you get . n.gh powered Car capable of 60 miles per hour, and I am constantly punning over the rough Black Country roads, which are mercile -the present time.

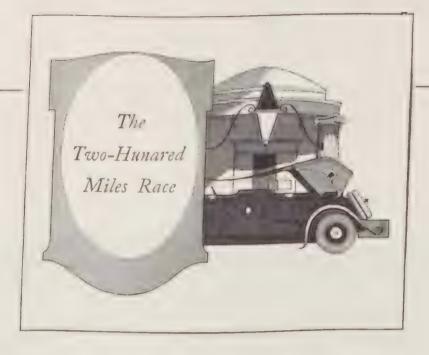
> DUNLOP TYRES OF THE MAGNUM TYPE

are obtainable from all motor dealers

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THE MOTOR-OWNER



OCTOBER

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VOL. III NO. 29

C O N T E N T S

A HAPPY FAMILY. (Frontispiece) 2 THE RIGHT CAR AT THE RIGHT PRICE. By Captain E. de	THE TALBOT FIFTEEN	
Normanville Better Roads. By "A Prominent Official"	Some Fine Ascents in the Shelsley Walsh Hill Climb The Knight-Engined Mors Memoirs of an Unprofessional Salesman Gear Changing Made Easy The Greatly Improved Deemster The Two-Hundred Miles Race Yachting Ashore and Afloat. By Captain P. A. Bairon Concerning Inns. By C. S. Brooke New Motor Vehicles for the Estate	26, 27 28 29, 30 31, 32 33 34, 35 36, 37 38–40 41
FRESH FROM PARIS	THE WASTE OF OIL	42 43 14, 45 44 45
Carriages." Mr. W. Hacker Arnold.	ROADS IN OCTOBER	.17

The Editorial and Publishing Offices are at 10, Henrietta Street, Covent Garden, W.C.2. Telephone No., Gerrard 2377 (3 lines)

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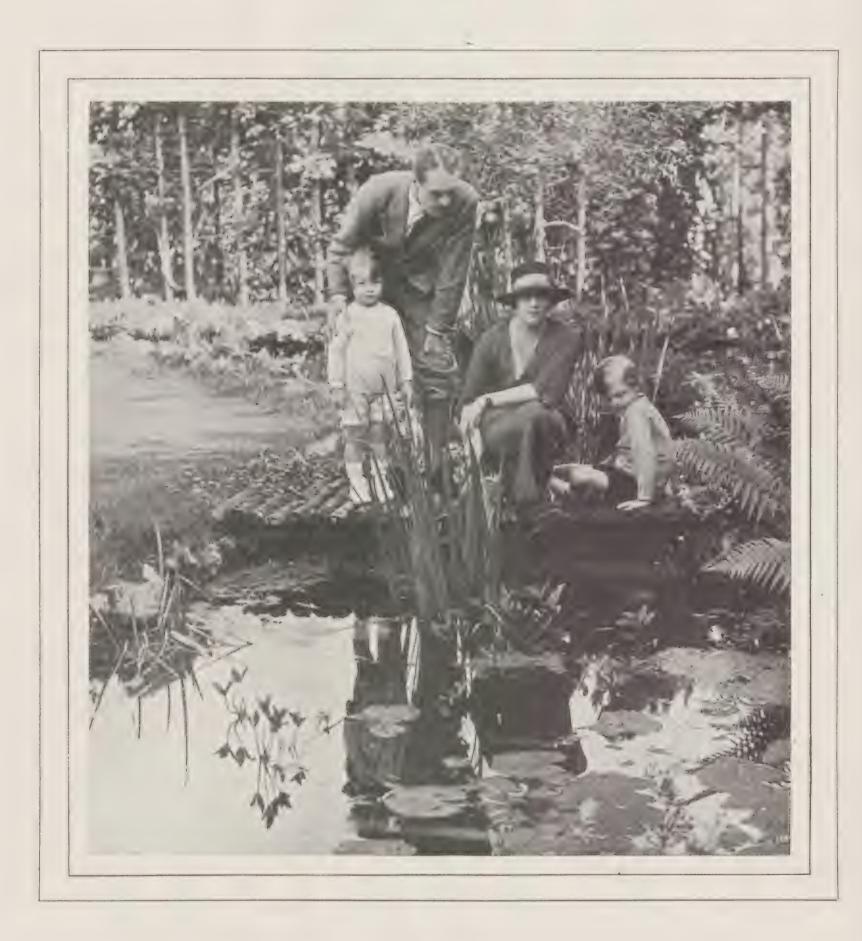
Subscriptions should be directed to the Publisher at the above address.

The Editor will be pleased to consider contributions of special interest to the car owner, provided they are of high quality and in every way suitable to the magazine. Short illustrated articles are preferred, dealing with any aspect of private motoring, either as regards touring or the home management of the car. First-class snapshots of roadside scenes or incidents are particularly desired. All photographs and sketches should be fully titled on the backs and bear the name and address of the sender.

Contributions should be addressed to the Editor of "The Motor-Owner," 10, Henrietta Street, W.C.2, and should be accompanied by a stamped, addressed envelope. While every effort will be made to return them if unsuitable, the Editor cannot hold himself responsible in case of loss or damage.

\mathcal{A} H \mathcal{A} P P Y F \mathcal{A} M I L Y.

Mr. and Mrs. Owen Nares with their two sons, David and Geoffrey.





AFTER DUE REFLECTION.

"The Motor-Owner" considers Passing Events with an Open Mind.



OPTIMISM!

NOTE of optimism! How very refreshing in these days of dark industrial outlook! For our own part, if a choice has an optimistic outlook than share the But it is between the two that one article on the future of the new high-has taken an outlook on the immediate future which is frankly optimistic. He new that if you want one of these

new types at the Show next month you must get busy quickly and place your order. Otherwise you will have to wait for delivery

Possibly we do not go quite whole-hoggedly into these cheerful realms. Yet we welcome this new move of British manufacturers as very opportune and helpful. It will stimulate trade not only in the new class of car, but also in the larger types. We see eye to eye with the author of the article on many of his points. And we hope that his optimism will prove justifiable up to the hilt.

BAD DRIVING.

No experienced motorist who uses the road much can fail to be impressed with the many exhibitions of bad—or ignorant—driving which he encounters. We hope that the bulk of it is due to ignorance. But whatever the cause, it is to all our interests that the proportion of dangerous driving should be materi-

ally reduced, if it cannot be wholly eradicated. We grant that every one cannot be an expert driver. It is necessary to be born with a road instinct and have that backed by lengthy practical driving experience. But all can be careful. And in Care is to be found the greatest factor for reducing the number of accidents.

FALSE ROAD SIGNS.

The Government, like of all us, has many sins on the debit balance of its conscience—if a Government has one! As with the majority of us, they are of

commission and omission. In the latter category it is high time they took action in regard to the erection of spurious road danger signals by private individuals. They are a menace to the safety of every road user. In some parts of the country every private carriage-drive or farm-track is guarded by a sign such as "Dangerous Crossing" or some similar falsification of the truth. This is an outrage against common sense. By the dictates of equity, common sense, and the general weal of the public the responsibility for avoiding danger at such points obviously rests with the party coming from

the private on to the public road—be he millionaire, motorist or humble farmer.

These spurious signs are a great danger. One becomes satiated with the "Wolf! wolf!" cry proving false, and is thus tempted to ignore the sign guarding a genuine "Dangerous Crossing." We call on the Government to make it an illegal action—subject to severe penalty—for any private individual to erect a road danger signal.

THE COMING SHOW.

There is an air of pleasant expectancy about the coming Motor Exhibition. With a curious unanimity, every one is possessed of an optimistic belief that it will see the beginning of better times in the motoring world. May every one be right! On our part, we shall spare no effort to make our next issue our finest achievement. If that be boasting, please excuse us! But now these better industrial signs are at last on the horizon, we shall do our utmost to help.



WE WONDER!

There is a young fellow named Tainte—
Designer of motor-cars—Saint;
What he's never heard
Is rubbish—absurd—
When Tainte doesn't know it, it ain't!

(The 1922 Tainte car at next month's show should therefore be both soul-stirring and epoch-making, if it can be found.)

MOTOR OWNER

THE RIGHT CAR AT THE RIGHT PRICE.

By Capt. E. de Normanville.

And some Thoughts on the "Pride of Possession."

RAVO, Mr. British motor car manufacturer! From all I can see your latest move is one which should redound to the credit—and advantage—of everyone concerned. You are leading the world in what I believe will open up a new era in motoring. A new type of motorist will evolve from it. A new type of motorist will evolve from it. A new type of motoring will be created. A new market will be tapped—one hitherto neglected or even unknown. May I even venture to suggest that a new boom—from this new broom—will be swept up on the horizon of the better times coming.

And now, Mr. Reader, what on earth am I talking about? I sense your question and admit its timely justice. Well, I'm referring to the new type of motor car which you will be going to see at Olympia and the White City next month. You will have one of the best exhibitions that has been held. Regarding the subject from the point of view of novelty, you will be as "satiated cormo-

"satisted cormorants" loosed in a rabbit farm — an there be such a thing.

NOVEL AND USEFUL.

But it is not merely novelty that you will inspect. You will study a new species of motoring utility. Many firms of high standing reputation will be offering small cars at very moderate prices and involving minimum up-keep expense. There is nothing very marvellous in that, you may opine. True bill—there is not. But in the mode and manner of the new move there is much more than meets the eye. It is that which gladdens mine. Let me try and explain.

dens mine. Let me try and explain.

To start with then, it would be perfectly simple to offer an inexpensive car by sacrificing standards of type and finish. But there would be nothing novel in the move. The market is one which is already adequately catered for, and competition therein would not be too astute. No, your manufacturer of reputable name is not going to compete in that category. He is wisely keeping up the quality of his materials, his workmanship, and even (in many, if not all cases) his finish. He is only sacrificing his previous ideals in bulk and certain principles of construction. He is offering the quality job worthy of his name—only in a small edition.

Thus we shall see a type of car which we have not seen hitherto. We shall have the small car of high quality and possessed of a name in which there is pride of possession. Oh that Pride of Possession! Let me tell you all about it, and what it does in regard to the sale of motor cars.

PRIDE OF POSSESSION.

Now, at the present time-and always for that matter-there are thousands upon thousands of motorists who cannot afford a £750 car and its upkeep, but who could afford a £300 to £400 car with its much reduced running expenses. Yet these most excellent folk do not buy a car at all. Why? Well, the answer is a wee bit on the indelicate side. These people do not buy because of the dictates of "Swank"—or, to be more Johnsonian, "Pride." Of course none of us would care to be called a swanker, or considered unduly proud, or snobbish. Yet there is a touch of it in all of us if we have only the courage to admit it. And in motoring matters it frequently takes a peculiar turn.

Let me make a confession in an effort to explain my point. It is my hope that I have

had the bulk of my swank or snobbish ness knocked out of me by the many excellent folk one encounters in the motoring movement. Yet—as is probably the case with you, Mr. Reader, if you have the courage to search your inner self—some amount of pride, snobbishness, or swank (or whatever you like to call it!) remains. And in my case it would work "motoringly" somewhat thuswise.

A Non-Purchasing Type.

If I could not afford to buy "



A Wolseley Fifteen crossing Loch Long on a somewhat primitive type of ferry.

ANOTHER BOOM?

troper motor car—I would not buy one at all. I would go in for a motor bicycle which was "the goods" in the motor bicycle world, rather than purchase one of the many excellent little runname not its intrinsic performance value dic not carry justifiable Pride of Possession. You may say that I should be set like should be extremely foolish to act like that. Quite right Sir—or Fair Madam none the right Sir—or Fair Indeed. But none the less that piece of stupidity would not sell a car for one of the manufacturers concerned.

But, believe me, there are umpteen thousands of potential motorists who Would do exactly the same. Everyone cannot have a Rolls-Royce, Lanchester, Napier or Packard. But in the next financial category it is quite Wolseley, Sunbeam, Daimler and so on. Down to a lower price category it is still in it is still socially (? snobbishly) all in order to have a Humber, Rover, the very sanderson, Albert, and even the very sanderson, Albert, and even the very sanderson. the very excellent £442 worth given in the Cubitt.

THE HIATUS.

All these types are "socially correct, these types are of c in their various spheres of financial cost. But once You come down below the recent £400 mark, it is very difficult to find anything suitable for the company of able for the man or woman of matured age possessed of a keen desire to do the right thing. Of course it is quite different for the youthful folk. They are in another category altogether. They have neither the need nor desire "to keep up appearances" to the extent indicated. But I am sure you have gathered in your mental Vision the type I am trying to portray who would not buy a car at all, if they could not afford what they considered

> THE RIGHT CAR IS THE CAR OF RIGHT

the right type. And in 99 per cent. of these cases, enthusiasm would not run to the purchase of a motor bicycle. Therefore they buy nothing at all. Have you got me, Steve-or Stevette?

A NEW ERA.

But all that is going to be changed now. Our Immortal Bard asked long ago, "What's in a name?" A car by any other name may run sweetly, but for thousands of potential motorists, if the name is not the right name, the car is not good enough. Pleasure bows to Pride—and there is no purchase. Now, however, things are to be different. Quite inexpensive cars with names which undoubtedly are "the right thing" are to be offered in good variety. The Rover company have led the way valiantly. My hat off to you, Messrs. Smith and Starley, for your brilliant foresight and initiative. You have already broken the ice, and your good pioneer work will be cemented and fructify with the efforts of other firms of similarly high reputation. There are thousands upon thousands who will revel in your splendid 250 guineas' worth of Rover but who, however, would not even contemplate the purchase of identi-

cally the same car if it were the Jones-Brown. Such is life!

. THE COMING BOOM.

But we have to take life as we find it. What's in a name? Well, 'most everything when it comes to motoring matters. The boom in these new types is already upon us. The British manufacturer is opening up a new market with this new type. Already they are being ordered in their thousands by the astute agents throughout the country. You, Mr. Reader, had better get busy quickly if you want reasonably early delivery of one of these new models. They are going to sell-and to sell like hot cakes. But they cannot be produced so quickly or in such great quantities.

And there is another point-incidental though of vital importance. The British manufacturer is very astute in this move. By the inception of this new type of car, he is able to distribute his overhead costs over a larger basis. His bulk contract purchasing power is also strengthened. His plant is also working on a more economically efficient basis. By all these means, aided by reducing costs in material and labour, he is enabled

materially to lower the cost of his larger cars. Many of the reductions already made are most commendable, and make the prices compare more than favourably with their pre-war equivalent. All this is good—excellent. Unless I am much mistaken, it spells the end of the bad period through which we have passed. There is unlimited scope for motoring development. But we must have the right cars at the right prices. And it seems as though we are going to get them. Therefore, again, Bravo Mr. British motor car manufacturer—and au revoir, Mr. Reader.



A quaint old fire-bell at Moreton-in-the-Marsh.

PERFORMANCE AT THE RIGHT PRICE.



BETTER ROADS.

A "prominent official" gives motor-owners some authoritative information as to the future plans of the Ministry of Transport.

T would be difficult to conceive of a civilised country that has no highways, unless, indeed, we indulge in flights of futuristic fantasy or delve into the prehistoric past. The road has become a synonym for progress, and by its nature ramifies a land in every direction. And, being so common, or at any rate commonplace, the road tends to be regarded as an unobtrusive and inarticulate part of civilian cosmogony.

But, none the less, the road is particularly clamant. Just now it is talking to our ears, apprehensive and appreciative in turn, to the tune of several million pounds sterling. Overlooked and well-nigh forgotten, the highway, in all its degrees of importance, is revenging itself upon a civilisation that has outpaced it.

Unless, forsooth, you regard the motor vehicle as a retrogression.

Yet, split hairs, or terms, as you will, the road and its claims have become insistent.

Those enterprising folk whom Oliver Wendell Holmes, with his quiet transatlantic humour, termed Old Italians discovered roads to be indispensable. And that, moreover, in spite of possessing nothing fleeter than tame horses and a paucity of two-wheelers of no more than 6 h.p., and less speedy than a motor bus.

Whether we have risen or fallen since the days our ancestors dressed in the blue woad they never could put in pawn, the fact remains that roads are what we want very much, and very much what we deserve.

It is alien to our present purpose to consider the highways of the world—we have a sufficient little problem in those of Great Britain alone, great enough, indeed, to exercise the wit of various bodies of able men, to provide occasionally hectic hours for various local authorities, and to give motorists something on which to expend their superfluous gold.

The roads of Great Britain, then, shall entice us to a, let us hope, profitable, if brief, consideration.

Roads provide many problems. They are extensive, they are expensive. According to Lord Montagu of Beaulieu, there are in the United Kingdom something like 30,000 miles of main roads and 200,000 lower grades; a big total for a comparatively small nation. Entrusted with their oversight—in the best sense—are a quartet of authorities, viz.: the county council, county borough authorities, urban district councils, and rural district councils. But to these must be added the recently formed Ministry of Transport, which endeavours to evolve a coalescent system from what one unkind critic has termed "patchwork plans."

Centralisation being the popular slogan in many other undertakings, we need not be surprised to find that it is casting its shadow over highway administration also. It might be more truthful to substitute a brighter alternative for the word shadow—but one has to bear in mind the doubtful temper of the modern tax-paying citizen. However you may view this point, the fact remains that 1921 has ushered in something of change in this respect, and already, as we shall see later, the new régime has effected alterations that most of us would commend.

And as to these millions of pounds sterling that are being expended annually on the roads of the United Kingdom, one raises the very natural query "Why?"

Kingdom, one raises the very natural query, "Why?"

Up till recently the roads cost nothing like so much. But then, there has been a war, and war's aftermath—neglect, or inability, or lack of men or of available money, or of method suited to changed conditions—all of which have projected a frequent "pay day" into our own unfortunate lives

And apart from the war's harmful effect, we have to-day to deal with an unprecedentedly prolific motor brood, of which the total, on May 31st last, amounted to 853,900 automobiles registered as having been licensed for

use. Moreover, the modern motor vehicle having an exceptional hunger for travel, this large number covers an immense mileage per day, and with that mileage causes wear that is far more intense than anything of which we have had experience.

As a matter of fact it has been estimated that the average main road costs £1 daily per mile, and with the expense involved by the construction of certain badly needed traffic-relied bye-passes, one may not find it difficult to accept Lord Montagu's recent statement in The Times, that the annual expenditure on roads and bridges in Great Britain amounts to £40,000,000 out of the rates, plus what the motor taxes provide.

From figures of this colour it would seem that our responsible authorities anticipate the imminent approach of the day when motor vehicles will be still more numerous, heavier, and permitted higher speeds. And even if they will not, we have outspoken need for reform this very day, a need with which the Ministry of Transport is already grappling. Amongst its aims this Department is strong on the need to do away with acute bends and heavy gradients, and believes in roads considerably wider than the average, and in the value of specially constructed routes that skirt towns or congested areas. Moreover, the Ministry of Transport has seen in these enterprises a welcome chance to employ thousands of ex-Service men who are out of work, and to expedite these operations the Unemployment (Relief Works) Act was passed, which enables land to be acquired, where urgently needed for roadmaking, at seven days' notice.

seven days' notice.

By anticipation of probable traffic developments, the Ministry of Transport makes a point of purchasing land that will be required for its schemes considerably in advance, thus getting it at less cost, with benefit to the rate payer's pocket, and also doing away with the chance of buildings being erected on spots whence they would

MÖTOR

have to be removed to allow scope for the projected improvements.

During a recent conversation the writer had with a prominent official in something of the Department's aims. No ideal road should be "all-weather." one in thirty being considered the maximum, except where the district is mountainous. Nor should the camber or convexity of any road exceed fact, be a good deal less when the road is on the slope.

As to curves, a desirable minimum radius is 550 yards, while unobstructed essential.

Since the new roads now either in course of construction or contemplated traffic conditions, their character will naturally be of interest. Of ail the Ministry of Transport's highway improvements, the increased width is the most commendable. It is true that this lateral expansion will not immediately be utilised fully in every case, the intention being to do so when the traffic warrants it. That is sensible, as long as future needs are not overlooked. It is, in any case, a great

advantage to have the provision for such development.

In the metropolitan area the new arterial roads the Ministry of Transport is constructing are about 100 ft. wide between their defining fences—and even 120 ft. in the case of the Tilbury Road diversion at Dagenham—but not the whole of this width will be utilised at present: not, indeed, until finances are adequate and the traffic warrants it.

In most cases there will be a carriageway at one side, which will leave ample space for a similar track on the other side, with a central, unmetalled strip for a possible tram track or other form of mechanical transport.

At the time the writer interviewed the Ministry of Transport at least a dozen undertakings were being carried out by this Department. Good progress was being made with the Eltham by-pass, where, within the L.C.C. area, the Woolwich Borough Council were engaged on the work, and the road will in all probability be shortly extended eastwards into Kent.

Across the Woolwich Housing Estate there is an important new thoroughfare known as the South Circular Road. It is practically completed, save for a little work on the surface of the carriageway. On that portion of

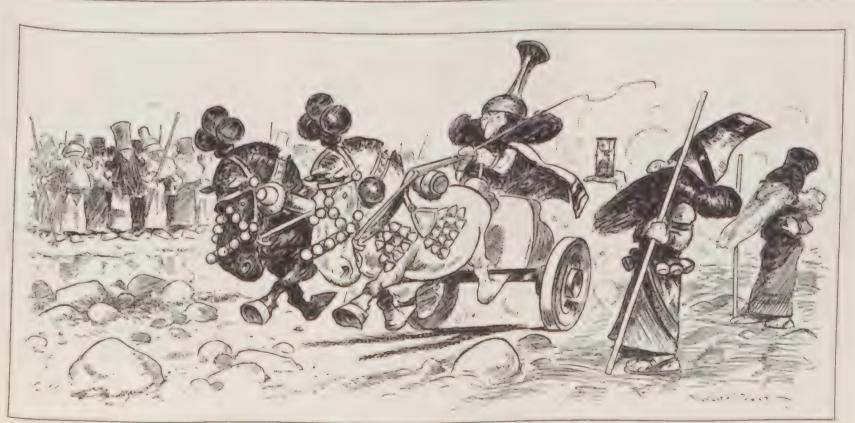
Eastern Avenue which crosses Lea Marshes, in Hackney, a body of unskilled men is at work, the grading is nearly finished, and steps are being taken to improve the bridges.

An important by-pass is that known as Shooter's Hill, in the Metropolitan Boroughs of Greenwich and Woolwich. The work in this area is heavy, since a cutting of about twenty feet is necessary to obtain easy gradients across the brow of the hill.

In the Hammersmith-Acton area a considerable length of the carriageway of Western Avenue has been surfaced with concrete, while several hundred men are at work on the new Cambridge Road in Tottenham, Edmonton, and Enfield.

Another large body of labourers has made good progress on the North Circular Road, which passes through Willesden, Edmonton, Southgate and Walthamstow, and negotiations are proceeding respecting those portions of it in Finchley and Hendon, also in Epping Forest.

The Ministry of Transport is also developing a road, called the New Chertsey Road, at Chiswick, while the Middlesex County Council has decided to proceed with the Brentford bypass extension to Staines Road.



EARLY ROAD RECORDS.

Jehn breaks the eight minute record from the Tigris to the Euphrates.



STARS OF THE FIRST MAGNITUDE

Some are shedding their radiance on the theatre-going motor-owner at the present time; others have temporarily passed







Miss Ivy Shilling (left) of delightful memory. Last time we heard of her she was in America.

Miss Lee White (centre), the late hostess at the Vaudeville, has not yet whispered a word as to her future plans.

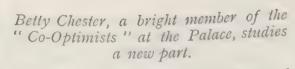
Miss Winifred Barnes (right) charms the parrot as she does her audiences.

IN THE THEATRICAL FIRMAMENT.

into the invisible portion of their orbits—in other words, are resting. These stars are not fixed—they have orbits.







The Dolly Sisters of "League of Notions" fame. Rosie had an accident recently, but the reader will have to try and guess which is which, for we can't help him.





THE SIX-CYLINDER SUNBEAM.

Four-cylinder engines are so good in this year of grace that one is sometimes tempted to query the necessity for an extra pair of cylinders. A trial of the Sunbeam Six answers the question, and provides ample justification to the additional complication.

ORE than a year ago, in writing of the 24 h.p. sixcylinder Sunbeam, we compared the car with a race-horse on account of its spirited behaviour; and now, after a further and more extended trial run, we see no reason to revise our opinion. While the car is a big car so far as the performance one expects from it is concerned, its engine is actually of only 23.8 h.p. by R.A.C. rating, and we have no hesitation in saying that its performance is such as would not prove disappointing in a vehicle of fifteen horse power more. The 80 mm. by 150 mm. engine, as a matter of fact, gives all the power that one can conveniently use; gives it, moreover, with the utmost willingness. One has not to coax to get the car moving at more than 60 miles an hour; one has not to persist in one's demands in spite of noisily expressed reluctance. It is perhaps one of the outstanding features of the car that there is not detectably more effort on the part of the engine when it really is "turning over "than when one is pottering along at the still-legal limit.

Four-cylinder engines are so good in this year of grace that when trying out a particularly good specimen one is often tempted to ask what is the good of the extra complication of two more cylinders. The difference be-tween a good "four" and a "six" of equal class is somewhat minute, but it is easily appreciable on the Sunbeam. The effortlessness of the engine at all speeds and the ease of progression hour after hour at forty or fortyfive miles an hour; the immediateness of the response when, after slowing down through a village, one desires to climb up to the standard pace again -a host of little things of this kind needing to be experienced to be really appreciated, all bear witness to the advantage of the fifty per cent. multiplicity at least of the Sunbeam's six cylinders. The reader who owns a good and fairly powerful four-cylinder car may very likely say that it is just those points that have been mentioned that make him particularly fond of his own car. The only reply is that he must try a Sunbeam six and judge for himself; in our opinion he will soon admit that while his own four-cylinder car is silent, vibrationless and responsive, the Sunbeam is even more so. It is all a matter of degrees, and of very finely subdivided degrees at that, but there is little doubt that the two extra

cylinders of the car more than justify their existence.

It is scarcely necessary to speak of the wonderful lightness and accuracy of the steering, for with the capability of easily attaining a speed in excess of a mile a minute heavy or uncertain steering would make the car little better than a death trap. At the same time, that of the Sunbeam is so excellently designed that it merits a word; and yet that word is difficult to find. One can drive, say, 200 miles in the day without getting tiredwithout getting even fed up; and the reason seems to be, so far as the steering is concerned, and apart from its mere ease of operation, that one is always certain of the exact track of the front wheels. If there is room for the car to pass—in a gap in the traffic, or between a tram car and the kerb—one has never any doubt as to one's ability to steer exactly through the middle of the gap. There is no need to measure mentally the clearance on either side; no need to worry, in fact; and that is really the keynote of the whole car. The seats are luxurious rather than merely comfortable, and it is a question of angles rather than a superabundance of upholstery, so that one carries out the



SUSPENSION SENSATIONS.

task of driving under the most favourable conditions. The clutch is light and docile, and the gear changes simple. Brakes are powerful and certain, and do not give that impression of liability to engender side slip, which one frequently encounters, while the accelerator pedal is situated in precisely the right position, and gives one perfect control over the engine. There is no sticking at any point, no straining of the instep to secure full throttle opening—not that one often wants it—and no necessity to feel with one's foot through its range of movement for the most satisfactory point of depression.

It is almost impossible to convey the sense of definiteness of the whole car. One sits down and is automatically thrown into the most comfortable disposition of one's body. The pedals, so far as the driver is concerned, do not have to be found— They are right there beneath his feet, and can be depressed without fatigue. One depresses the accelerator or turns the steering wheel in a certain fashion to secure a certain result, and infallibly that result is obtained, not approximately but exactly. And even more remarkable, perhaps, but no less satisfactory, the standard hood supplied with the touring car really does Protect the occupants. It is a real one-man hood, and the side-curtain equipment is so complete and so accurately made that one may keep as warm and dry in the fully rigged touring model as in the most elaborate of town carriages.

We have the best of reason to speak of the controllability of the Sunbeam, for our trial run consisted of a cross-country trip from the

neighbourhood of Aylesbury to Southend and back, and except for the occasional mile or so which it was necessary to travel on a north-andsouth main road before reaching the requisite turning to continue our progress east or west, there was scarcely a moment when extreme watchfulness was not required. With an unresponsive or fatiguing car such a journey would have been a nightmare; with the Sunbeam it was only disappointing, since we were seldom able to use the car to the best advantage. At the same time it was an ideal-demonstration of the suitability of the car for all conditions of travel and an object-lesson in extreme docility. It will be gathered, however, that we do not recommend readers to follow in our wheel tracks if they propose to take a run for the purpose of pleasure, since we do not know of a more irritating route than that which we mapped out—and which, for obvious reasons, we will not detail.

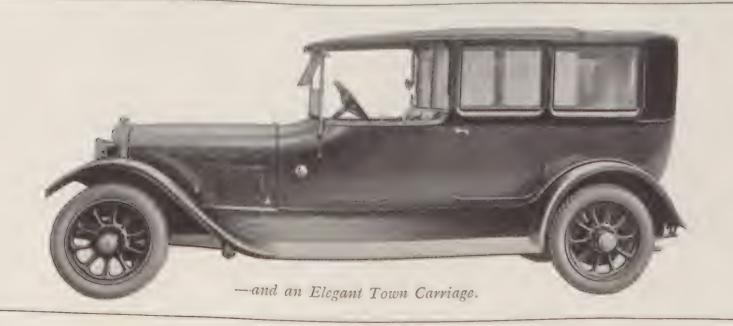
The Sunbeam came through it with flying colours; she responded to the lightest touch of steering wheel, brake or throttle, and made as nearly a pleasure trip of the run as it could possibly be; and, on returning in the evening to our starting point, when we had all "had enough of it," the trip had not proved unduly tiring to the driver.

Having said so much in favour of the car in most of its details and as a whole, one approaches the question of suspension with a certain amount of trepidation lest, in attempting to tell the plain unvarnished truth, one either under or over states the case. It is not sufficient to say that the springing is "good," or even "excellent"; it

is so remarkable, on the other hand, that a review of the car would not be complete if no mention were made of the springs. It is not even true to say that the car rides over the roughest of roads as easily as though the surface were perfect. As a matter of fact, the action of the springs on a rough road is an altogether pleasant sensation; it adds to, rather than detracts from, the performance of the car. In the whole course of our run and subsequent running about on the Sunbeam we can truthfully say that we did not experience a single bad road shock, and for the most part we really enjoyed the floating sensation caused by the operation of the springs.

Few people realise how great an effect suspension has upon the running of a car, although in really bad cases a car is, of course, difficult to drive on a rough road. But even the slight differences in the comparative excellence of various well-known makes have a very marked effect from the driver's point of view, and quite apart from the mere comfort or otherwise of the cars.

To sum up, the six-cylinder Sunbeam is undoubtedly among the few outstanding examples of British design and workmanship in its higher and latest developments. It is a thoroughly sound job from the purely mechanical point of view—as, emanating from the Sunbeam factory, it must be-and it is a car in which "designing" in the true sense of the word covers the carriage as a whole, and does not stop short when an efficient chassis has been produced. It is a car which, having several very worthy competitors, is an indispensable representative of the British industry.





PASS-STORMING EXTRAORDINARY.

A Record of a Strenuous Alpine Tour.

By Charles L. Freeston, F.R.G.S. (Author of "The High-Roads of the Alps.")

ORE firmly than ever am I of opinion that there is no finer test for a modern car than that which a mountaineering tour provides; and just as firmly am I convinced that the motorist can experience no greater joy than that of breasting an Alpine ascent on a car that is not merely equal to, but superior to the task.

If the roads over the great passes were all built in such a way that it were a serious effort for the car to ascend at all, the sense of climbing might be fraught with more anxiety than pleasure, and would certainly become

tedious if the effort were repeated on pass after pass. But the main Alpine carriage roads are scientifically engineered on a definite mathematical plan, which only varies with the date at which each was designed.

The famous Stelvio, for instance, is now nearly a hundred years old, and for boldness of conception and for high quality of surface it is still a marvel; but a 9 to 10 per cent. gradient and eighty sharp hairpin corners were deemed adequate to the occasion by its designers. The mountain roads, on the other hand, that were built in the Dolomites in the first decade of the present century have gradients of 6 to 8 per cent. as a maximum, while every doubling back on the zig-zags is provided with a loop of wide radius, and there is nothing to interrupt the triumphant upward sweep of a good car.

Consequently one does not toil slowly up a modern pass; one takes it on the run, and when this touring speed is maintained for mile after mile, and one rises, rises, and goes on rising for thousands of feet, instead of the hundreds one gets at home, the sense of mastery is complete. Meanwhile, the landscape is unfolding fresh scenes of beauty at almost every stage, and, free from any anxiety as to the ability of the car to reach the summit, one may stop at any moment to admire a specially entrancing view, to lunch in a shady spot, or to use one's camera to good effect.

To the ardent motor mountaineer, however, the immense variety of the Alpine roads is not without attractiveness. His desires, naturally enough, are for a preponderance of good roads, but he none the less welcomes an occasional battle with something stiff,

and enjoys the thrill of speeding over a modern pass the more keenly by way of contrast with an older road of less scientific design, which he may have crossed the day before.

Variety, in fact, was the dominant characteristic of a tour from which I have recently returned, for it included not only passes of ancient and modern type, but one that was so new as to be still incomplete, another that had been built for the Austrians by Russian prisoners and had been allowed to fall into decay, and a third which was never intended for touring locomotion at all, and was quite unfit for any type of car.

A glance at the appended list of the passes crossed will serve to indicate the comprehensiveness of the tour:—



A view of La Meige from the Col du Galibier (8,530 ft.).

	Nation-Altitude
	ality. in feet.
Pass. Stelvio	Italian 9,041
Col du Parpaillon	French 8,671
Col du Galibier	French 8,530
Grand St. Bernard	Swiss- 8,110
Gland St. Belliald	Italian
Col d'Izouard	
	French 7,903 French 7,716
Col de la Cayolle	Ttolian 7,710
Pordoi Col d'Allos	Italian. 7,382
Col d'Allos	French 7,382
Sella	Italian. 7,277
Petit St. Bernard	French- 7,178
G " 1	Italian
Grödner	Italian 6,970
Col de Vars	French. 6,939
Falzarego Jaufen	Italian. 6,913
Jaufen	Italian 6,869
Coldu Lautaret	French. 6,790
Col de Sestrières	Italian 6,660
Simplon	Swiss- 6,594
	Italian
Rolle	Italian 6,424
Tonale	Italian 6,181
Campolongo	Italian. 6,165
Mont Genèvre	French- 6,100
	Italian
Tre Croci	Italian 5,930
Forcella Staulanza	Italian 5,817
Costalunga	Italian 5,751
Campiglio	Italian 5,413
Broccone	Italian 5,305
Col de Viste	French 5,266
Ampezzo	Italian 5,065
Col des Aravis	French 4,915
Reschen-Scheideck	Italian 4,901
Brenner	Italian- 4,495
	Austrian
Mendel Col de Porte	Italian 4,475
Col de Porte	French. 4,429
Col de la Faucille	French- 4,331
	Swiss
Col de St. Cergues	Swiss 4,051

FORTY-SEVEN PASSES!

Pass. Aprica	Nationality.		ltitude in feet.
Aprica Col du Cuol-	Italian		3,965
Col du Cucheron	Italian		3,875
Col de Plainpalais Col du Frênce	French		3,871
Col du Frêne	French		3,871
San Lugano	French		3,818
Gobera Col de S	Italian		3,599
Col de Savine	Italian	0 0	3,339
Col de Leschaux.	French		3,248
Col du Mont Sion	French	0 0	2,966
Col de Vence	French		2,592
Col du Chat	French	0 0	2,461
	French		2,100

For the benefit of those who have not yet become acquainted with the altered state of things, I may point out in passing that nearly all the passes described above as Italian were Austrian before the war.

The list amounts to a total of forty-seven passes, but the Falzarego, Campolongo, Tre Croci, Ampezzo, Col de Savine and Col de la Faucille were each covered twice. The aggregate altitude of the fifty-three ascents, which were all effected in three weeks, was 293,296 feet. Had I totted up the figures as I went along I might, perhaps, have been tempted to work in another pass and bring the total to

three hundred thousand feet for the sake of round numbers, but I was in no sense out for record breaking. There were certain passes which I was anxious to re-visit in order to ascertain whether the war had affected their normal condition, and there were some that were new creations since 1914, and fit objectives for exploration accordingly; the remainder were simply incidental to the route.

It is no easy matter, by the way, to arrange a tour among the Alps in such a way as to omit nothing that one wishes to see, any more than one can exhaust the resources of the south of England in a single tour. You may describe a circle or a triangle, but you cannot intersect either without doubling your tracks, and doubling your tracks over lofty mountains barriers is not quite so light a matter as it might be on level ground. The one road of major importance which does not figure on any list is the Mont Cenis, but if I had included it I should have been obliged to miss the Col de Sestrières, Mont Genèvre, the Col d'Izouard, the Col de Viste, the

Col de Vars, the Col d'Allos, the Col de la Cayolle and the Col du Parpaillon (the highest road in France), and nearly all these passes exceed in picturesqueness the road from Modane to Susa, good old friend though it be.

It would be absurd, of course, to attempt to describe in detail all one's interesting experiences on a tour of 3,150 miles, either from the point of view of novelty or adventure. But I may briefly call attention to one or two features which were chiefly impressive to an old tourist.

I very quickly found that the alleged impossibility of taking a car with comfort over the "bad" roads of France was a myth. They have been described as a nightmare of pot-holes, and to my own knowledge many people have been deterred from crossing the Channel this year by stories of broken springs and universally war-worn roads over which one could do no more than crawl.

In a spirit of extreme caution, therefore, I chose a route for the outward journey along the *lignes de grand* communication instead of the routes



A too-common form of obstruction on Alpine roads this year: Timber-loading on the new Forcella Staulanza road.



The Rolls-Royce at the summit of the Grand St. Bernard Pass, at an altitude of 8,110 ft.



nationales, and found smooth surfaces all the way through France to Geneva. When coming home, however, I decided to chance the main route through Dijon and Reims, so full of pre-war associations. My friends, Mr. and Mrs. Scott Lindsay, who were my compagnons de voyage, will confirm my statement that the road was perfect the whole way from Geneva to Reims!

As a matter of fact, on the second day of the homeward run, the conditions seemed so good that Mr. Lindsay, who was driving, began to let the car out and, despite two windscreens and a total running load of 2 tons, II cwt., 2 qrs., 18 lb., the Rolls-Royce responded to the call in no uncertain way. Several times it reached a speed of 72 miles an hour, and once, only ten miles from Reims itself, it touched 77. Even through the battle zone there was nothing in the way of pot-holes so bad as the pavé for ten miles beyond Compiègne, which was in its normal pre-war condition, and on this stage we had to travel more slowly than at any other time during the entire tour.

As regards the Alpine roads, they differed from pre-war conditions in two respects. The first was the unusual amount of timber traffic. So much wood has been cut down for war-time and reparation demands that it has not all been cleared away, and, instead of meeting occasional wagons on

sundry passes which I knew of old to possess sawmills, we were liable to be obstructed on nearly every mountain road. So far as Italy is concerned, however, the actual cutting of timber has been stopped by Government order, and before the next touring season the surplus stocks will have been cleared away.

But the most striking difference between the present day and July, 1914, was the evidence afforded everywhere in

what was once Tyrol of the fact that there had been a war in the Alps. Filled-in trenches, barbed-wire entanglements, and shells are to be seen on the Dolomite roads, and even at the summit of the lofty Stelvio itself, while the ruined hotel and custom house there is unapproachable because it is still full of asphyxiating gas shells.

We had no tyre bursts, but picked up two or three nails. In the way of mishap to the car the only thing that happened was when it was stationary on a flat road in the Pusterthal. We had pulled up to have a drink of tea, and were all standing on the grass at the side of the road. A pair of horses drawing a load of hay passed the bonnet, and then we heard a dreadful scrunching and perceived that the hay wagon was drawing two trailers with enormous loads. The centre one projected so far that it damaged the mudguards and tore off the tool-box.

Our adventures on the crumbling and avalanche-swept Col du Parpaillon I must describe on another occasion, nor have I space at this moment to deal with the new roads which I was on the look-out for in the Dolomites. But I cannot close this article without a tribute to the car that carried us up mountain after mountain to the greatest heights that can be reached by road in Europe, swirled round innumerable hairpin corners, and glided down steep and long-drawn descents

under complete control. I thought highly of the Rolls-Royce in 1914, during the Austrian Alpine Trial and afterwards, when I took it over still higher ground on the Stelvio and the Galibier; but the 1921 car has achieved the seemingly impossible feat of putting its predecessors in the shade.

Its acceleration is incredible until actually experienced, and even on the road it cannot be appreciated to the full unless one looks at the speedometer, so perfect is the springing and so smooth and effortless the engine. The steering is literally the most wonderful and beautiful thing I know of in motorcar construction, and the lock is so designed that even a car of 16 feet over-all length could be taken round sharp corners with greater ease than many a car of shorter wheelbase. The brakes were powerful to the very end of the tour, and as one who has known the joys of landing in England, after an Alpine journey of not one-fourth the severity of this last one, with both brakes out of action, I can appreciate the point.

As for the 53 ascents, the car did not "climb" them—it ran, and stopped for nothing, even on the Stelvio and the Grand St. Bernard, save the custom house near the summit of each. In all my experience I have never known such tireless and quietly powerful progression. And at the finish of the long tour the engine was

purring as sweetly, without a period at any point, as though it had nothing more to do than to sail down Bond Street. It is the barest justice to put these facts on record. I have tried to avoid superlatives, and may express a final opinion in precise and monosyllabic form as follows:—

I have yet to meet the car which, for all kinds of work, and for all-round worth, is as good as the Rolls-Royce.



A hairpin corner on the Col d'Izouard.

PREHISTORIC MOTORING.

The Evolution of Round Wheels and other Important Matters.

(By Phil B.)

NE of the earliest known forms of motor vehicle was the meat wagon, used in the Stone Age by prehistoric man, 2-ton dead-weight Brontosaurus or its brains out with a boulder of appropriate size.

Another vehicle was the water wagon, similar to that upon which all good—and bad—Americans are now with exceedingly dicky seats, became popular about the same time, also weak-end '' touring cars; the latter designed for the purpose of taking hills, when the weak end would be afford good, if hard, ground for separation or divorce.

With these vehicles, trouble by reason of weak or broken springs was unknown, for the simple reason that there was none. For a similar reason leaky floats, broken piston rings or defective radiators were never known

to cause unparliamentary language. On the other hand, "fierce"
clutches sometimes caused great
trouble amongst rival cave women
when disputing each other's right
to the affections of some prehistoric hairy horror.

As far as one can gather, the bodies of prehistoric pleasure cars were of unseasoned treewood and their design aimed more at utility than beauty. The only protection against inclement weather was given by a few dabs of gaudy the financial year. The same remark would apply almost equally to the population.

Only two speeds were used, the downhill being the faster of the two, and the cars were noted for their immunity from tyre troubles.

Lack of resiliency and excessive vibration were sore points, and the confidence, inter alia, of car owners was considerably shaken until these

troubles were overcome by the judicious interposition of a wife. The origin of shock-absorbers as fitted at the present day is thus accounted for.

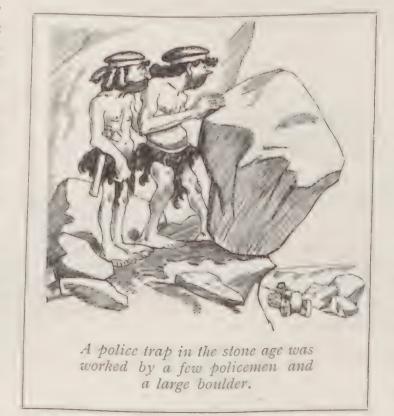
The wheels of these prehistoric vehicles were of stone, squared in the first instance, to prevent them from slipping backwards when ascending hills. At a later period they were improved, owing possibly to the introduction of evening classes and restricted hours of opening. At any rate, an enterprising prehistoric taxidriver (modernised specimens of whom can still be seen in London), whilst sitting in his natural state of hairy deshabille embowelling his breakfast of toasted Pterodactyl, was struck with the idea that if the corners of his wheels were removed it would increase the business turnover from his vehicle. Accordingly he hastily summoned a few of his freshly caught wives, and, propounding his theory of circling the square, he bade them get stone saws and put it into practice.

After hours of strenuous labour by the cave women whilst their energetic husband lay on his back smoking, their efforts were rewarded by the production of wheels of a somewhat circular shape which, when fitted to his 20 dinosaurus-powered cab, enabled it to exceed the speed limit, as is the present-day custom. Thus did the fashion of round wheels originate. It is indisputable that wheels have continued to go round ever since. Whether this also started the idea of sending round circulars history does not relate.

The driving licences of that period differed materially from those in use to-day. They consisted of sharp-pointed jagged lumps of flint, weighing about 14 lb. and attached to wooden handles to form the shape of an axe. Every driver carried one, and whenever his right to drive a motor vehicle was challenged he immediately took out his licence and offered its business end for inspection. A single glance usually convinced the challenger that this weighty evidence established the owner's right to drive.

The electric battery was unknown, but assault and battery was very popular and wonderfully efficient in assisting to "get a move on."

A police trap in the Stone Age was worked by a few police-men and a large boulder, the latter balanced on the edge of a cliff overhanging a portion of a ten-mile limit. Should an unsuspecting motorist enter the trap at a speed estimated by the police at 11.05 m.p.h. the boulder would be pushed off the edge in accordance with their policy of "push and go," being timed by a stop watch and guaranteed permanently to prevent the car breaking the regulations. After this hint had been dropped by the police, any available evidence of the motorist was carefully taken down-to the mortuary—and instructions for disposal from his next of kin were requested by the Disposals Board.



MOTOR OWNER 16

ALBERT ALL-WEATHER EQUIPMENT.

And a Personal Note concerning the Chief of Staff.

LTHOUGH the Albert cars on the road number only a few thousands—manufacture not having been commenced until after the armistice—the car is undoubtedly one that stands out amongst its neighbours, and owners are continually asked by other motorists concerning its pedigree and performance. If the first is limited to two years, the second, one might say, is worthy of a generation.

The manufacturing facilities have now been greatly increased, and Gwynnes, the builders, and the Service Motor Company, the sole concessionaires, both believe that the improvements introduced in the 1922 model have resulted in the production of a car that will be bought on the strength of its own intrinsic merits, apart from

its reasonableness in price.

Lengthened and strengthened, the Albert chassis, well sprung from the beginning, has now half-elliptical springs on the front axle, while retaining the inverted cantilevers on the rear. A single place clutch takes the place of the old leather cone, and both foot and hand brakes are fully compensated. Increased efficiency of the engine and an enlargement of the size

of the tappet rods and adjusting screws are among other improvements. Tyres, always of ample proportions, share in the general march to allround reliability. All wheels being fitted with Dunlop Magnums, including the spare.

For the one chassis there are available five types of bodies—two-seater, four-seater, coupé, Gwynne Patent All-weather, and a four-seater tourer with the "Service" all-weather equipment,

an entirely original fitting for which a patent has been obtained. It is really weather-proof, neat, light, and quickly fixed whenever bad weather compels its use. Passengers can enter or leave without removing any part, and the driver can signal traffic directions with a facility that is simplicity itself. By means of an ingenious appliance a portion of the protecting curtain over the door is pushed outwards, and when the signalling arm is withdrawn the flap springs back instantly, automatically and unfailingly into its original position. In fine weather when the overhead covering is not required, the equipment is carried in a weathertight box under the off-side running board. An accompanying illustration indicates the value of the arrangement, shows the double windscreen to which the hood is fixed, and the side curtains that open with the door. The Service Company cherish high hopes of an immediate jump into popularity of this model, and we see no reason why their hopes should not be realised. Constant demonstrations of the ease of manipulation will be given on Stand No. 240 at Olympia; and looking over this body, taking stock of the acces-

sories, the splendid finish, and other attractive features, one may well wonder, as many motorists have done already, how this wonderfully complete model can be offered at the price—£525—with a year's guarantee behind it, plus the now famous Albert service.

Possibly one man alone could answer the question. He is Mr. Geo. G. Mitcheson, founder of the Service Company and guardian of its future; a resolute, resourceful man of great propelling power; a big man, mentally and physically, fluent and forcible of speech-born of immense responsibilities—though those who know him intimately affirm that he must not be taken too literally. Mitcheson likens himself unto the bustling centre-forward of an ambitious football team, clearing a way for others to follow and back him up to the ultimate goal—the progress of the Albert car and the prosperity of the Service Motor Company.

Yet, beneath this aggressive commercialism, this impulsive, impatient, occasionally querulous personality, there rests another Mitcheson; a calm, reflective, analytical mind, a sensitive heart that encourages those buffeted

by ill-health or illfortune. A student of humanity, of psy-chology, of politics, he seeks the mitigation of human misery—it never can be wholly eradicated —the betterment of people, a life worth living for all. While tramping round his favourite golf course at week-ends, between the holes, inspired by breeze and sunlight, Mitcheson dreams dreams of a Utopia which surely should not remain for ever elusive.





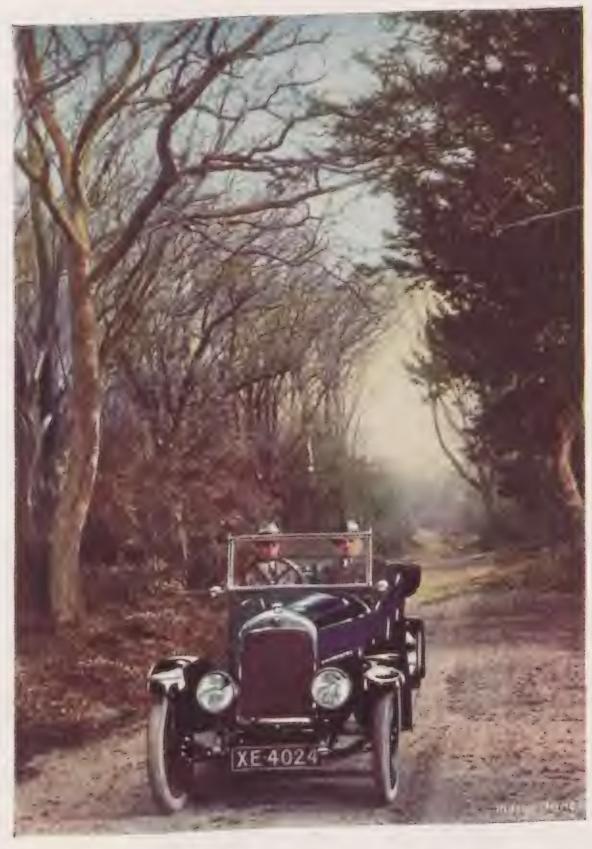
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OTOR NNER 17

"CHAPEL-IN-THE-WOOD."

By Felix Rindle.

There are many Bettwees, but to its lovers there is only one Bettws-y-Coed. Too many tourists merely pass through the village, which is worthy to be regarded as something more than a station on the road. Mr. Rindle considers the stretch from Pentre Voelas, through Bettws, to Capel Curig well-nigh as glorious as the most glorious twelve-mile stretch in Britain.

RANSLATE the "bettws" as chapel, the "coed" as wood; consider the chapels in Wales, their number—their ugliness (general, alas!) is a matter unfit for consideration, calm at any rate—and you must allow that to contract or in writing, as is so often done, is in a sense as silly as it would be to speak or to write of Church Stretton as just though there are a Bettws Abergele, a Bettws Cedewen, a Bettws Newydd, a Bettws - Gwerful - Goch — as much and goodness only knows how many other Bettwses besides, there nevertheless for the consideration of the construction of the construction

less, for all of them, is in another sense only one Bettws. Bettws-y-Coed excels the finest of all the other Bettwses as an omelet excels a pancake, the lark's trill the krex-krex of the corncrake, a gold sovereign a pound treasury note, and high poetry pedestrian prose. And so if hereinafter (as they say in legal circles) I, following the custom, write Bettws for short, hold me absolved from any disrespect towards the Cumraeg—that language hallowed by a tradition ever so long—and its multitudinous hyphens.

Bettws is a landmark on the way of the Holyhead road through Wales, but also something more. It nestles in a valley, but that statement too may be amplified. Nor would it do roundly to declare that Bettws is a place of lodginghouses, refreshment-houses, and hotels; for though one would state a truth in doing so, one Would nevertheless be guilty of an injustice. For at that those who know not Bettws, but have the misfortune to know New Brighton or Morecambe or Cleethorpes, might rush to the conclusion that Bettws, though smaller than those other places,

is akin to them in (to put it mildly) unloveliness. Whereas of Bettws it may be said, with no less truth, that it is a place where:—

"every prospect pleases,
And only man is vile,"
if the term "man" can by any chance
be so stretched, under poetic licence,
as to include the sandwich papers.

The lodging-houses and the others are not each and all of sorts that one would recommend every articled pupil of all the architects of England to study diligently and appreciatively; but that is not to say that any, much less most, of them are glaringly "out of the picture." The majority of them are built of native stone and

roofed with native slate; and slates, if they be less acceptable to the seeing eye than tiles or than thatch, do not disfigure stone walls as badly as they disfigure brick. Only in a detail here and a detail there may even an unreasonable man take exception to Bettws the village. In general effect it is anything but unpleasing. It fits in with the hills, with Pont-y-pair too-a high-arched bridge that has dared the turbulent Llugwy through four centuries; and also fits in with the rocky bed of the river. It mercifully leaves the hills alone, is a roadside village; and as the road does not do any climbing to speak of until it has parted company from the village, the landscape is not spoiled for

the landscape is not spoiled for the roving eye. And so, one thing with another—the modesty of the village, the fifteenth century four-arched, high-backed bridge, the racing peaty river, and the high everlasting hills—Bettws-y-Coed, besides being a landmark—a quite important landmark—on the Holyhead road, is one of the gems of North Wales. It beggars Llangollen, more famous, and would not lack backers were it to challenge

Beddgelert.

But Bettws, to its loversmany are they, and all ardent—stands for something more than the village itself and the setting thereof. It does not, that is to say, stand alone for the mile-long stretch, from the Waterloo Bridge (across the Conway) to Pont-y-pair, of the late Mr. Thomas Telford's great highway from London to Holyhead. In addition it stands for two of three of the grandest mountain valleys in these islands and a length of the third; for a llynllyn is the Cumraeg or Welsh for lake, mere, loch, or lough, look you !-shining high among the uplands and so christened-Elsi —as to set the most confirmed lover of "slippered ease" a-



The Conway Falls at Bettws-y-Coed.



walking; for a very noble mountain whose name is spelt Siabod and pronounced "Shabod," even as our Norman Beauchamp is spelt Marjoribanks and pronounced (so an American story goes) like the name of a certain pill; and for other mountains, to the number of eight, to say nothing of a waterfall or two, a bridge the Romans built—so, at any rate, the archæologists, knowing fellows, aver, assert, and asseverate—and a little church old enough to house the effigied tomb of Gruffyd ap David Gôch, who died in 1380, a grandson of that Dafydd ap Gruffyd who, twin brother of Llewellyn the Last, was hanged, burned, and quartered at Shrewsbury, after he had been dragged through the streets at a horse's tail, by order of that most chivalrous and Christian king, Edward the First.

Yesindeedlookyou!--only even at that one cannot convey a right proper sense of the speed at which those magic words come tripping off from vernacular tongues—there are sights for seeing in and about Bettws, indeed a sight of sights. Ours is a sophisticated generation, so used to strap-hanging and flying-machines as to be little

likely to be moved at sight of the Miners' Bridge as our fathers were moved. Quite so; but even we may glory in the valley-or, more properly speaking, gorge—in which that plank bridge is set. The bridge spans the Llugwy, whose bed is there bouldery, whose walls, perpendicular, are also of tock, yet not so uncompromisingly rocky as to deny venturesome saplings and suckers footholds, however precarious. And so in this gorge of the Llugwy, at the Miners' Bridge, and also at the Swallow Falls, a mile up stream, you have wood, rock, and water, that archcombination. The Swallow Falls are rather rapids than a true fall, but to say that is not to belittle them. The "grand cataract of Wales," as old George Borrow has it, is the Pistyll Rhaiadr. It, a true fall, a drop of 230 ft., is counted in as one of the Seven Wonders of Wales. You may have seen it—very few folk have, for it is in Mochnant, off the beaten track—but even so, it is little likely, unless you are "a quite Superior Person," that you will turn up your nose at the Swallow Falls, especially if you have the luck to see them after a night's rainstorm. Even

failing the storm in the night, you still may deem it worth while to send the Swallow Falls home, per postcard; for however the waters of Llugwy may be assuaged, there will remain the Gorge -the boulders, the woodlands, and

the venturesome saplings.

The Llugwy may be described as a "Peter Pan" river, and so may the Lledr. Neither has ever grown up, nor will. They are both rivers of the mountains, born on the mountains, and by mountains watched over and cared for till they lose their childhood, and with it their lives, in the Conway, the one a mile or so west of Bettws and the other a little east. And so the life of each, though a short one, is an adventure. As with Llugwy, so with Lledr—its young life is not troubled by any such set-piece as the Swallow Falls, it's true, but boulders lay many traps for it, so that it gets plenty of fun, often shakes with laughter, even though now and again it waxes petulant. And the valley down which Lledr comes tumbling is a very fine valley for its size. The rugged sides of the valley sport a sight of heather and of gorse. They stand wider apart than Llugwy's, are less like high walls,



Rapids on the River Conway at Bettws-y-Coed.

are apart enough indeed to make room for a little village. Dolwyddelan is only a quarrymen's village, and so is not "sweet Auburn" transplanted from the plains to the highlands. It is less—greatly less—a model village than a primitive, and so the traveller may be surprised at finding there a church that, however "restored," was built in the first quarter of the six-

teenth century.

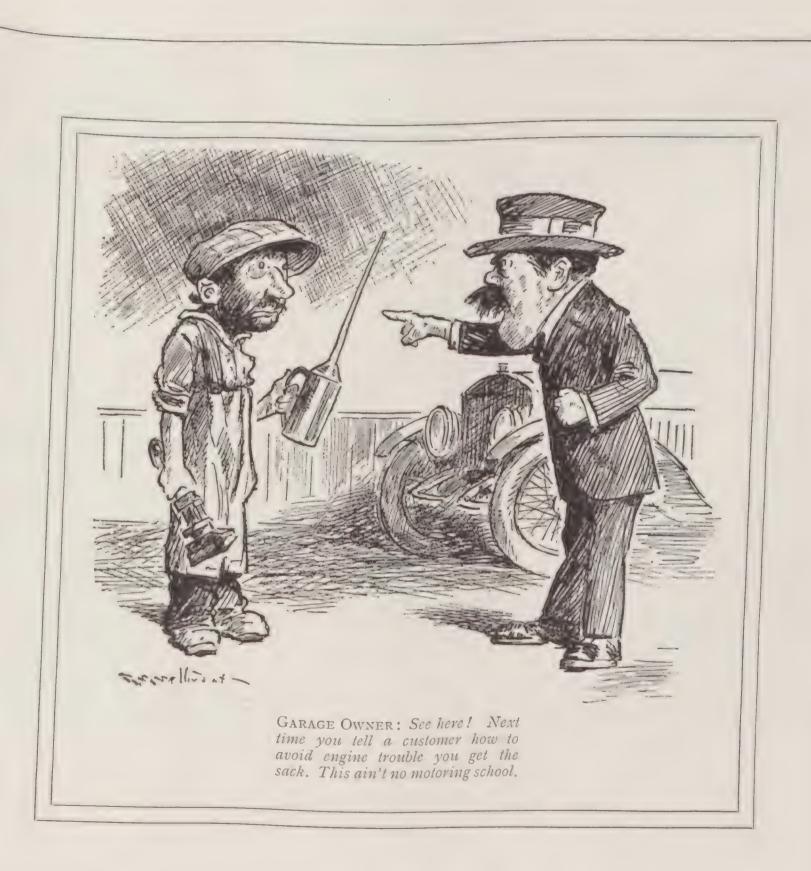
The Conway on its course to the Waterloo Bridge nigh Bettws is also a mountain river, in a gorge deep-set in woody and heathery hills. The traveller by the Holyhead road strikes the river about a mile below that very acceptable inn, the Voelas Arms, at Pentre Voelas. Not, however, till it has been reinforced by the Machno, four miles lower down the road-from thereabouts a road goes off to the left to Penmachno and Ffestiniog-does the Conway delve to any depth to speak of. Just below the mouth of the Penmachno road there stands, cn the right-hand side of the Holyhead road, a solitary cottage, and opposite to it a gap in the wall by which the other side of the road is parapeted. The gap gives on to a rough path, the

path, descending, into the gorge of the Conway. There the river comes pell-mell from a plateau into the gorge in style that would be admirable were it not that into the rocks a salmon ladder is built. As it is the Conway Falls need heavy rain to make them at all impressive, though the gorge is a fine sight in any case. From a gap on the left of the road a short distance below the cottage the traveller, if he be wary, may enjoy a great view, up the beautiful Lledr Valley, backed by the huge bulk of Moel Siabod. You well may rate that view as one of the grandest in Wales, and rate too the six-mile descent from the Voelas Arms to the Waterloo Bridge, the mile thence, through Bettws, the village, to Pont-ypair, and the ensuing five-mile uphill way of the Holyhead road to Capel Curig, a twelve-mile stretch well-nigh as glorious as, length for length, the most glorious in Britain. To this round statement a Scotsman, especially a Highlander, might demur; but all Welshmen, to a man, will endorse the statement, and no Englishman, not even a Cunibrian or a Westmorlander, is likely to take exception to it.

PLAIN SPEAKING.

THE GARAGE QUESTION IN A NUTSHELL.

There are garages and garages, more of one kind than another. Unfortunately, that's the kind one usually finds when in dire necessity.





A WOMAN'S NOTE BOOK.

By Christobel Nicholson.

The lady motorist is not usually a student of engineering; still less does she understand electrical matters. From experience, Miss Nicholson thinks that if some one took the trouble to explain the very elementary details of automobile electricity the life of the fair driver would be happier. Here she takes that trouble.

THEN I first took up motoring seriously I hated like the plague everything to do with electricity. I hated learning about its habits, I hated its shocks, and I loathed and detested it when it refused to do all that it should have done. Looking back on those times I am pretty sure that my dislike of the subject was the fault of my pastor and master. He was the chief electrician of a big engineering shopa clever man at his job, but he didn't understand the natural curiosity of womankind. He grew more and more irritated with me and finally threatened to turn me out of his shop if I asked any more questions. So I went, before being ignominiously booted, and struggled on alone for some while until I met a man who, although not nearly such a clever man as my first instructor, was a very fine teacher. Once again I was inquisitive, and this time I learnt why my questions were use-less. It is no good asking why, when, where, how or what about electricity. Not even Marconi himself can tell you what electricity is, so when you make up your mind to delve deeper into the mysteries, make up your mind also to refrain from asking too many questions at the first lesson, or your teacher may become "shirty" like mine did. Whenever I begin to think about

whenever I begin to think about electricity I remember a drunken man who became very friendly with me in the Underground one night. This is a perfectly respectable story so far as I am concerned (though what a Berkeley-Square-like dandy in a boiled shirt, top hat and evening tails was doing going eastward in a train labelled "Whitechapel" certainly requires a little explanation) and our conversation was amazingly high-flown and varied. It took us to realms far beyond the moon and deep beneath the sea. It ranged from Darwin to Florence Barclay and Bernard Shaw to the Bible. Anyway, the last I saw of my friend was when I left him, still in the train, at Liverpool Street. He followed me to the door and, leaning

out, made his final impressive state-

"Well, it all comes to this. The universe is made up of one element—and we don't know what it is."

And that exactly describes electricity. It is an element, but we don't know what it is. However, some people with brains far beyond my understanding discovered that such a thing exists, and having got thus far, they then proceeded to harness electricity, so to speak, until they could make it perform certain duties—and it is with those duties that we have to deal.

Perhaps the best working idea I can give you is to make you imagine that there are two kinds of electricity, and that each kind, for some unknown reason, is always very anxious to change places with the other, and will do so, in point of fact, whenever there is a bridge from the home of one to the home of the other. Once you get hold of this point you know what to expect of electricity in its behaviour.

The easiest way to illustrate this idea is to take an ordinary accumulator, or battery, wet or dry, and to attach a piece of wire to each of its "poles"—the terminals that stick out at the top. Regard each of the poles as being the starting point of one of the two kinds of electricity, and suppose that each kind is anxious to exchange with the other, and you have the working notion. Bring the free ends of the wires together, and you have provided the bridge. Each kind of electricity tries to get home to the other pole. Without the conductor there is no bridge—no way "home."

Let us go a step farther. It is not necessary for the "bridge" to be in the shape of a wire. Bury the ends of the two wires in the earth in your garden, and the electricity will still "flow." The bridge is now partly of wire, partly of the moisture in the dirt. Hence the term "earthing" a current as used in electrical treatment. But the "earth" need not be of dirt. It can be of any conducting material other than wire.

Let us make one more garden experiment. Take this time two batteries or accumulators. Bury the end of the wire from the negative pole of one of them in the earth; and bury the wire from the positive pole of the other also in the earth. No electricity will "pass" in these circumstances. The interchange only takes place when the two different kinds of electricity start, so to speak, from under the same roof. Positive electricity doesn't want to change places with "any old" negative electricity; it only wants to interchange with one of its own family.

I have dogmatised as to there being or not being any passage of electricity in the two garden experiments. If you had a proper electrical meter you could tell that there was electricity passing in the one case and not in the other. Or you can test it for your self, thus. In the first experiment have both wires buried in the ground, but have one wire detached from one terminal, or pole. Then as you touch that unoccupied terminal (or pole)

with the free end of the wire, you will see sparks at the point of contact—sure evidence that the electricity has got there. In the second experiment no sparks will show.

Now, although all this is extremely elementary and only the very beginning of an enormous subject, it may help you to cope with the more complicated facts with greater success than I did. Nobody ever explained to me these beginnings of all things electrical, with the result that I was never quite sure whether my magneto would ever function again after I had touched it. So start your electrical education at the very beginning. Tackle the ordinary battery first; secondly, make quite sure that you understand the difference between low-tension and high-tension current, then take somebody else's magneto to pieces, and finally attack your own but not till you are quite sure that you know exactly all that you are doing.

FOR THE LADIES.

FRESH FROM PARIS.

If one may judge from these examples, frocks are going to put in a little overtime this autumn. They certainly seem to begin earlier and finish later than some of the specimens we have seen in London during the summer.







Because a frock is designed in Paris, it does not follow that it is beyond criticism. We like the centre specimen, but have our own opinion as to the others.

MOTOR OWNER

"HIGH EFFICIENCY."

One is entitled to claim forgiveness for the play upon words contained in our heading, as anyone who has experienced the running of the Herbert Engineering Company's car will readily admit

THE initials by which the Herbert Engineering Company's Reading-built car is popularly described might stand with equal appropriateness for "high efficiency"—a play upon words for which our only excuse is that it is eminently justified by the performance of the engine. Eighteen thousand-odd miles is by all standards a respectable distance, and it would be no shame for the best of cars to require a few days in dry dock after this distance. Beyond the fact that the body has been re-varnished and the cylinder head and pistons have been decarbonised, we are assured that the H.E. car placed at our disposal for the purposes of trial not only has accomplished that distance but has not yet been into the shops for other than minor adjustments. And in spite of this fact the running of the engine gears and chassis generally is all that one could desire from a car of 13'9 h.p. Her fastest pace we found to be about 55 miles an hour, her best speed between 30 and 35, at which the engine not only pulls wonderfully but

does so with a complete absence of fuss. One can hear a slight hiss from the Zenith carburetter, and that is all. At any speed in the neighbourhood of thirty a hill has to be really steep to have any effect upon the speed of the engine; one would call the car a thoroughly good hill climber on top speed provided the nature of the road permits of " keeping her revving"; but to discover what she really can do in this respect it is

necessary to drop to third speed. There is no question then as to "revs.," and the acceleration of the car on this gear, even after slowing down materially, maybe for traffic on a fairly steep hill, is remarkable.

The car is so full of good points and so devoid of bad ones that it is difficult to know what sequence to follow in describing it. Steering, braking, and springing, however, are of first imporance, and particularly in their bearing upon comfort in driving the car with a view to making a respectable average on a long run. So far as the first is concerned, we found the steering to be of just the right degree of lightness; the castor action by which the wheels automatically straighten up after turning a corner is excellent, and although by reason of the provision of this action a very slight effort is required to turn a sharp corner it is only sufficient to give the impression that the car is absolutely under control, and involves no real physical exertion. The springing also is quite up to the average, and whatever is the reason—whether steering, suspension,

or proper weight distribution, or a little of all three—the car holds the road at any speed as well as any car we have tried, irrespective of power or price. To come, then, to braking while the side-brake is powerful and smooth in action, the performance of the foot-brake is quite perfect, and the method by which its remarkably combined smoothness and rapidity of operation is gained is worthy of study by other manufacturers. We hesitate to include in superlatives; all cars, indeed, are so good that their use is seldom justified, but the pedal-operated brake of the H.E. is undoubtedly superlatively good.

The same remark applies to every part of the chassis, and the H.E. can be looked upon as an outstandingly good example of the best class of British automobile engineering practice. The coachwork also—by Allen and Simmonds of Reading—is worthy of praise, for it is as good as new to-day in spite of the "bucketing" it has doubtless had in the course of eighteen thousand miles. The doors open and close, and no irritating rattles have

arisen in any part of the body. front seat is adjustable for distance from the steering wheel controls-and it works; still works, in fact. There is the same air of excellence and durability about the coachwork as about the chassis: what more can be said, except that the whole car gives one the impression — which we believe to be a fact—that it has been built with the idea of quality rather than price in view.



The H.E. car has an excellent appearance.

WE SHALL "MAKE THE PUNISHMENT FIT THE CRIME."

I'ERSES .IND REVERSES.

Our artist on returning the MSS. intimated that he can't draw hay carts or motor cars, but that he is a devil on pirates and curates. What can we do?



I.
IT does not do
To drive a Napier car into
A load of hay.

Worse still, a crowd Of rustics rude About the wreckage eftsoons* stood. II.
Such things are better done by tanks.
For this advice
We ask no thanks.

VI.
They stood around
And laughed with glee
To see us in
Such misery.

III.
We tried it once
And came off worst.
Our lamps were smashed,
Our tyres were burst,

VII.
Bucolic humour is quite low.
It hurts one's dignity, and so

IV.
The engine ceased
Its gentle hum,
While we, ourselves,
Were damaged some.

VIII.
When one is in
One's Napier Six,
One should avoid
Such parlour tricks.

* Eftsoons—Old French word meaning "before one could say knife."





THIS MONTH'S CARTOON.

Mr. W. H. Arnold, Pioneer Motorist and Coachbuilder.

R. W. H. ARNOLD, the subject of this month's cartoon, has more right than most people to claim the title "pioneer," for although he is known to-day merely as the head of a famous firm of coachbuilders, in the very early days he was, perhaps, as deeply interested in the sporting and engineering sides of the movement as any of the actual car manufacturers of those days. As a matter of fact, he was a car manufacturer himself, and learnt a rather bitter lesson. He went to the length of having a car specially built for him to compete in one of the early Isle of Man races, at an original cost of £300, but before he had finished with that vehicle it had "let him in" for an expenditure of something like £3,000. So thereafter he decided to keep to ground he was sure of; to devote his energies to coachbuilding, which at least had no secrets from him.

The firm of W. H. Arnold was in existence long before the advent of the motor car, of course—was engaged, in fact, in producing work of the highest class in the shape of four-in-hand coaches and so forth, and Mr. Arnold was one of the first, if not the first, coachbuilder of those days to see that the new development was not merely a flash-in-the-pan, but the dawn of a new industry. Arnold bodywork in 1897 may not have been up to the 1921 standard, but it was as popular in those days as it is to-day; and Mr. Arnold remembers from painful experience the difficulties with which he

had to cope in those days. The chassis manufacturers cared for one thing only—performance—and did not worry as to the almost insoluble problems which the pursuit of their ideal set for the coachbuilder. The result was that early cars consisted very obviously of two parts, the chassis and the body, which it was next to impossible to blend into a harmonious whole. As the car became more certain from an



Mr. W. Hacker Arnold.

engineering point of view, the plaint of the coachbuilder not only became audible, but began to receive attention, with the result that nowadays the designer does make some allowance for the fact that eventually a body will have to be fitted to his chassis

Mr. Arnold himself is an optimist whom it is a pleasure to meet in these dull and uncertain days. He will refuse to admit that there has been, is, or can be, any real depression in the automobile industry, and, so far as his special branch of it is concerned, he has very strong views. He maintains that coachbuilding as a trade essentially belongs to Great Britain; that no country in the world produces finer motor car bodies, combining grace of outline and really sound workmanship, and that the coachwork artificers of this country can hold their own against all comers.

Although he took part in early sporting events, such as the Tourist Trophy race, the South Harting and Aston hill-climbs, the Brighton speed trials of 1905, and so on, Mr. Arnold does not now number motoring among his recreations and hobbies. He is automatically a motorist, of course, and is a founder-member of the Royal Automobile and Royal Aero Clubs, but his principal interest is given to coachbuilding, with occasional breaks for a little deep-sea fishing. "Business first" is a very sound maxim by which to order one's life, and it is most distinctly Mr. Arnold's.



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THE TALBOT FIFTEEN.

A Car from which one expects much—and is not disappointed!

N these days of highly efficient engines one has become blasé, and the finest performance leaves one unmoved. If one obtains from an 11.9 h.p. car behaviour to be expected Only from a 15'9, or, from the latter, running which would justify the existence of a 23.8, it is seldom matter for surprise. We have tried many—most, if not all—of the standard cars of all Powers, and it seems to us that the 15'9 h.p. type is undoubtedly the best for all-round purposes. It is admirable and sufficiently economical as a mere two-seater; or, at the other end of the scale, is capable of carrying elaborate closed coach work. But as a five-seated touring car it is ideal—for reasonable mortals.

"Fifteen-point-nines," however, are much of a muchness, and, having settled upon the type as being suitable, it is difficult to select the most suitable example of that type, unless one accidentally comes across a car of outstanding merit in some particular. Where all are so satisfactory, of course, it must indeed be a remarkably good car to outshine its fellows in any respect. We have got to admit, however, that in the course of a recent 500 miles trial run on the Clement-Talbot fifteen, even Our deadened sensibilities were penetrated by the super-excellence of the car. To say that it is the finest car of its class would be to risk accusation of

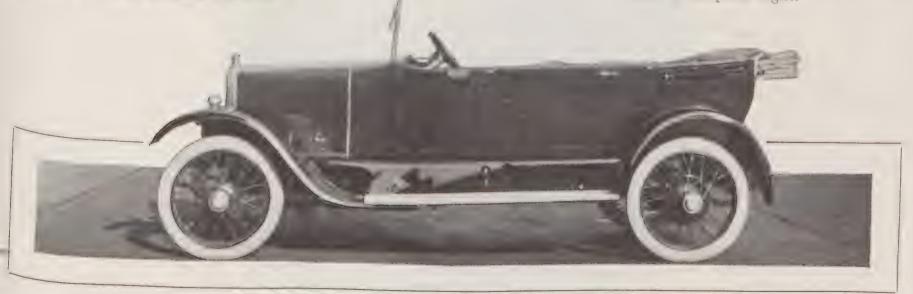
exaggeration; we prefer to say that it occupies a class of its own. Nominally the 80 mm. bore of the fourcylinder engine gives a rating of 15'9 h.p., and the car is subject to a £16 tax; but actually the engine is so abnormally efficient that, as we have said, it can scarcely be considered in relation to other cars of the same nominal rating.

In spite of the astounding capabilities of the Talbot, both in speed on the level and in hill climbing—notably on top gear-it is both economical in fuel consumption (and to obtain the best results a half-and-half mixture of benzol and petrol is essential) and delightful to drive either at moderate speeds on the open road or in traffic. The car is something of a contradiction. Usually a vehicle which is so light to control in every respect and so sensitive in the steering gives an impression of a certain amount, one almost said, of flimsiness. The Talbot, despite the lightness of every detail of the control, has characteristics which are quite the reverse. It has a feeling of solidity, almost of that heaviness which once was the only factor that secured good road holding properties. Now one imagines that it is largely a question of springing, for certainly the Talbot is

not heavy; the capabilities of the car with a relatively small engine are sufficient guarantee of that. And so far as the actual comfort of suspension is concerned, the springs are certainly most efficient. It is possible to travel over roads which one knows to be positively wicked—the Uxbridge Road between Ealing and Southall, for instance—at a steady thirty or more without feeling a single bad shock, even with the car empty but for the driver, while with its full load the Talbot positively floats over pot holes, gulleys and all the ills that the post-war road is heir to. This efficiency is naturally not without effect upon the control of the car, and it is sufficient to say that at any speed up to its maximum, which is in the neighbourhood of 60 miles an hour, the steering is light and absolutely certain.

The driving of such a car is a pure delight. It is so effortlessly performed that one is tempted to go on and on without a thought of rest. Our trial run, for instance, consisted of a little trip from London to Tintagel and back a matter of nearly 500 miles—inside twenty-four hours. The single involuntary stop was to change a wheel upon which the tyre had punctured; the car itself ran without a falter, and at the end of the run the driver was no more tired than might be expected

after a sleepless night.





SOME FINE ASCENTS IN THE-

The Shelsley Walsh Hill Climb, organised by the Midland Automobile Club, is one of the most sporting events of the year, and is always a subject for keen anticipation for months in advance. The Club has held a series of annual hill climbs since 1901 which was broken only by the war, and since 1905 the venue has been the stiff hill in the grounds of Court House, Shelsley Walsh.



Mr. H. W. Cook's 30-98 h.p. Vauxhall makes a fast ascent.



Mr. Jack Sangster's A.C. shows what an eleven-point-nine can do.

Mr. C. A. Bird, driving the six-cylinder Indianapolis Sunbeam, repeats his performance of last year, scoring fastest time on both occasions. He made a new record for the hill.



SHELSLEY. WALSH HILL CLIMB.

There were thirty-three runners this year in the four events, in each of which two cups were offered, ranging from Captain Frazer-Nash's 10 h.p. air-cooled G.N. to 30–98 h.p. Vauxhalls and six-cylinder Sunbeams. On one of the latter Mr. C. A. Bird made fastest time of the day, thus repeating his performance of last year and establishing a new record. Fastest time in the light-car event was made by Captain Nash.



Captain Frazer-Nash and his G.N. did not disappoint those who always anticipate a fine performance from the combination. He beat the previous record.



Mr. Percy Kidner's 4½-litre Vauxhall, driven by Mr. M. C. Park, makes light of the hill. He also beat the old record.

Mr. Leon Cushman, driving an II'5 h.p. Bugatti, makes things hum in the light-car class. He was 2nd on time.





THE KNIGHT-ENGINED MORS.

A Car that Combines Sweetness of Running with Instantly Awakened Life.

THE Mors has always been somewhat unobtrusive so far as the British motorist is concerned, and yet it has a very firm footing in our market—gained, it can only be supposed, purely on its merits, since spectacular "stunts" have never been engaged in by Mors concessionnaires in order to gain the attention of the public.

The writer first encountered the Mors many years ago, and was incidentally introduced to his first experience of a police trap, at Markyate Street—luckily for him when the "other fellow" was driving. The capture was quite unjustified, as the car was being driven at a reasonable pace and in a reasonable manner, but the inherent human desire to "take it out" of something, or somebody, when visited with injustice led thereatter to a remarkably brilliant demonstration of the pace of the Mors, culminating in a non-stop express trip from Newport Pagnell to Highgate in

sixty minutes.

The Mors was a good car in those days; needless to say, it is a better car now, and it still stands out from its fellows as something a little better than most. The Mors of to-day is sans soupapes, and we have yet to find a better example of the Knight

sleeve-vaive engine. The essence of the principle is that it secures vibration-less running, of course; but the Mors is of outstanding merit in this respect. And yet, with all its sweetness it is full of instantly-awakened life; the engine "jumps to it" in a fashion that sergeants-major used to dream of when trying to pump the rudiments of drill into raw "rookies"

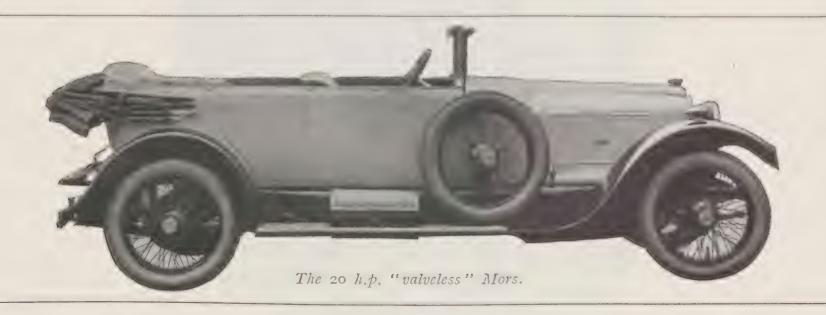
The responsiveness of the engine makes the Mors an easy car to control, provided the brakes-which, at their best, are very good indeed-are properly adjusted; and the particular design of the clutch, the band-brake principle of which has always been a Mors feature, gives wonderfully easy operation and gentle engagement. The resistance of the clutch pedal, in fact, is quite the lightest that can be found on any car of the size of the 20-h.p. Mors; and in view of the fact that it is this point which usually makes or mars a car from the lady driver's point of view, it is a car which is eminently suitable.

As things go nowadays, one must regard a four cylinder 90 mm. bore engine as on the large side, but the Mors was certainly not disappointing in regard to power. She climbed certain hills on third speed with perfect ease, for which we were quite

prepared to let her down to second, and on one particular gradient which we usually consider to be a second-speed hill we deliberately took the car up at a crawl on third. The ability of the engine to hang on at quite a low rate of revolutions, and without the thumping which a full throttle at low crankshaft speed usually induces is one of its strongest points. Incidentally this makes for ease of control; while one is quite aware that it is much better from every point of view to run under a lighter throttle on a lower gear, it is probably some satisfaction to the novice to know that even though he fails to drive according to the book, the engine will automatically compensate for his omissions.

And this ability to keep on giving approximately full power at low rates of revolution makes the car absolutely ideal for traffic driving, where the constant necessity to change up and down through the gate makes a less flexible engine anything but a pleasure to control.

The Mors, as a matter of fact, is a splendidall-round car. It is easy to drive for the novice, and yet possesses sporting capabilities calculated to appeal to the expert; and again it is a most docile and respectable town carriage.



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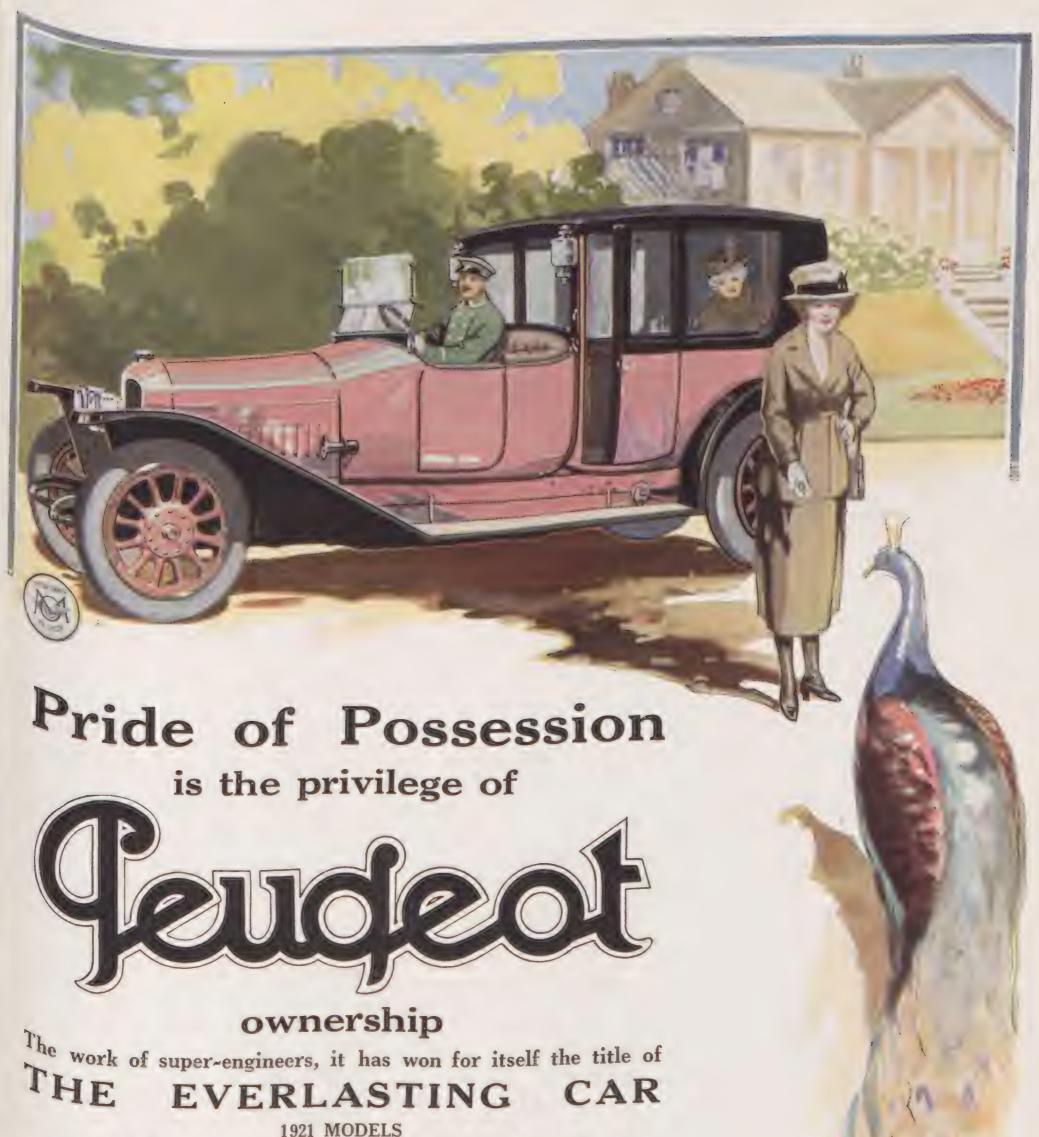
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MEMOIRS OF AN UNPROFESSIONAL SALESMAN.

Describing how pride very distinctly goeth before a fall in the second-hand car market.

WISHED to sell my car. It was a high-class American machine. It was practically new and, in fact, was. unlike the average "almost brand-new" second-hand car, in perfect condition. We waxed greatly enthusiastic, my household and I, over the ease with which we should secure a deal; we wished, I might here state, to purchase an English car of lower horse-power—for the 1st of January, 1921, loomed large upon our horizon. "We will advertise," I said, "in need to do."

We advertised. Nothing happened.

"Perhaps," I remarked, cheerily, "the Price is too high," for, I confess frankly that, being composed of very ordinary human flesh and blood, I had succumbed to the profiteering epidemic and had added £150 to the list price, in my advertisement. I reduced it by £30. "Now," I said.

Three weeks went by—my hitherto unbounded optimism began to fade. Every day I said to myself as I shaved: "I expect I shall be innundated with letters this morning." No letters were forthcoming. On the last day of the third week I said, apologetically: "I'll drop another \$\frac{1}{2}50\$ and see what happens." As I spoke, I felt acutely conscious that several members of the family sniffed. Not aggressively, hardly audibly, but nevertheless they sniffed.

At last a man called to see me. It was a gorgeous day in October, and I, smoking peacefully

before the library fire, felt that indeed all was right with the world. "Show him in, Janet," I said. He came. He was a small, rotund, personage with a delicately carmine visage, his hand, as I shook it, with tears in my eyes, was podgy and very warm.

"You are looking out for a car?"
I murmured, motioning him to my saddle-bag chair. "Well, I think I may be able to show you the goods. Have a cigar?"

He selected one languidly.

"Yes, I saw your advertisement—your price, of course, is absurd."

Absurd! My price! Who was this fellow to tell me that my price was absurd? However, I decided to ignore his little pleasantry; I should gain nothing whatever by losing my temper at the outset. Anyway, the fellow, for all his podginess, was not a fool. I decided to treat the situation as a huge joke.

"Aha," I smiled, "Wait till you've

seen the car."

He also smiled—wanly. "Let us see the car, then."

We accordingly made a move to the garage, though, for the life of me, I cannot explain the rushing and scrambling noises outside in the passage when I laid my hand on the library door handle. I can only hope that my visitor saw nothing of a blue cotton frock that whisked round a corner some few yards ahead of us. . would not have liked him to get the idea that we were an ill-mannered household, because, for all his podginess, he seemed a person of some importance.

"So this is the car?"
he said a few moments
later. "H'm—has she
been started up to-day?"

"No," I assured him; and forthwith sprang into the driving seat and pressed the starter button. In a moment the powerful six-cylinder engine was turning over as sweetly as a gyroscopic top. Barely a sound emanated from the long, sleek, blue bonnet; in fact, only a faint spiral of exhaust drifting into the soft October after-



How it feels when you discover you have attempted to sell a second-hand car to its manufacturer.

A DEMONSTRATION RUN.

"She ought to do it . . . there's nothing extraordinary about it . . . she's MADE to do it"

I looked askance at the little podgy gentleman who thus dared to speak deprecatingly of my car's good qualities. So very annoyed was I that I switched off the engine and glared at him petulantly. He smiled. "Please don't be annoyed," he said, "a car to me is a car; if it functions properly, it is but doing its duty; if not, I take no further interest in it!"

His manner puzzled me. Quite obviously he was no ordinary buyer. I decided to change my tactics.

"You would like a run?" I hazarded. He nodded. "Certainly, but may I glance at the engine first, then we will set out?"

I raised the bonnet proudly. He suddenly produced a pair of horn-rimmed spectacles, and peered, owl-like, into the interior of the bonnet.

like, into the interior of the bonnet. "She's kept well, eh?" I said. He nodded abstractedly, and:

"Where's the oil gauge?" he said. I made an elaborate gesture; in a moment he had extracted the level rod and was examining it placidly. "The sump's barely half full," he remarked, after what seemed an age; he handed the rod to me. It was true. I gasped.
"The—the engine's hardly been run

"The—the engine's hardly been run yet, wait till she gets going and splashes the oil about," I answered feebly.

"What nonsense!" he interrupted, sharply, "the only accurate test is surely after the car has been standing idle some time? Haven't you read the Instruction Book? We—it ought to make a special point of that!"

"I'll fill it up, then," I said, weakly, "and we'll take her out—she's a wonder on the road!"

.. He smiled at me as though I were a

child of twelve, as I tipped the "Arctic" into the funnel.

I changed into second, the gears protesting slightly, and then into top. As the speedometer crept to thirty we turned out on to the big highway, narrowly missing a diminutive light car that happened to be speeding by at about forty miles an hour.

"You took that corner too fast," said the little man at my side; he had retained his horn-rimmed spectacles, and his eyes twinkled owlishly at me through the preposterous lenses. I snorted, and pressed the accelerator; the little light car skipped nimbly to one side as, with blaring Klaxon, we roared past it at close on fifty.

"Don't press her too much," said my companion, "excellent as these springs are, the effect of this road upon them is not of a desirable nature."

"I was only showing you . . ." I began, childishly.

"I know," he soothed, "but I happen to be aware of her speed capabilities, you see—mind that old woman!"

Hot with shame, I released the accelerator. "Suppose you drive?" I suggested. "Willingly," he responded. We changed places.

An hour later he twirled into my garage. Weak, demoralized, and unmanned, I descended from the passenger's seat.

"Have a cup of tea?" I asked; and without another glance at the car I left the garage.

To my remark that I had never seen such a brilliant driver, the lady who presides over my domiciliary edifice smiled.

"One lump or two, Mr.——?" she asked, in that winning way that had always made me as wax in her hands.

"Oh!" I interrupted, "I don't believe I ever asked you your name."

I turned to our visitor, "Our maid, Janet . . . quite untrained I apologise, Mr.

He told us his name, helping himself heavily to crab-apple jelly the while. His name was the same as that which stood in neat blue capitals upon my car's radiator.

"You are'nt . . .?" I began in-

credulously. He laughed.

"Yes, I am the designer of the car -it is my child. You see," he continued as he saw the look of wonder on our faces, "I just happened to be over in this country on a little business trip. I am the guest ofmentioning a famous English motor manufacturer, and I have become so utterly weary of driving an English car that I decided to purchase one of my own machines, second-hand, to use during my visit; your advertisement caught my eye—that is all—though, incidentally, I am not an American, though I have lived all my life in the States: I am, in fact, as English as you

He plunged vigorously into a slab of jelly, resuming, after a brief interval during which I gaped like any street urchin:

"As I said before, your price is absurd; that car of yours is not worth £150 BELOW list price; it's been very badly treated, shockingly treated.
. . . Thanks, half a cup."

January the first has come and gone. I have not sold my car, for as my friends tell me, my next customer might conceivably be the mechanic who engraved the chassis number on the dumb irons. No, the business of selling automobiles is not for me; a journalist who attempts to dispose of his motor-car is assuredly courting disaster—"even if he does occasionally write for the motor papers," as my wife, with her usual aptitude, added.

A. G. B.



AND THE MORAL

of the tale is that it is just as impossible to sell a second-hand car to its manufacturer as to attempt to coax an ostrich into a canary cage. So for your own sake don't try either.

GEAR CHANGING MADE EASY.

While the deep engineering knowledge of the expert is not necessary, it is advisable that the motor-owner should make himself conversant with a few elementary "Whys?" and "Hows?" If he knew just what happens inside the gear box, for instance, gear changing would lose all its terrors.

EAR-CHANGING is the bugbear, the principal stumblingblock, of the novice. He finds quietly from a standstill and change up progressively until the top gear, be it third or fourth, is reached, but he Positively dreads changing down. The consequence is that if by fair means or foul other than by changing gear he can get to the top of a hill he will do so. The engine begins to labour three-parts of the way up, and in trying to find the "hot spot" in the range of accelerator pedal depression had be ignition; sion he forgets to retard the ignition; he slips the clutch, remembers the ignition lever, loses the "hot spot," and finally makes such a mess of things that, instead of merely slipping into third and running up the hill respectably at twenty-five miles an hour, he has perhaps to change right down to the first, or lowest, gear.

Now we talk about cars that will do "almost anything on top," but you will notice that even these are provided with a gear box, and unless the top gear be unduly low, as in the case of some American cars, that gear box is not put there for ornament. It is meant to be used; and if the novice would only take the trouble to find out just what goes on inside it, he would lose his fear of gear-changing and, incidentally, get very much better results from his car.

The alternative definitions of "horse power" are indirectly illuminative of the purpose of a gear box. One horse power is the force required to raise 22,000 lb. to a height of one foot in one minute; or to raise 1 lb. 22,000 ft. in one minute. Obviously, the same gear ratio that will lift the heavy weight a short distance is not suitable to lift the light weight a long distance in a given time, although the same

power is concerned in both cases. A different ratio is required; and this is precisely what the gear box does for a car—it makes it possible for the same engine to lift the car to different heights in a given time. Thus, if the car will climb an easy gradient of a certain length on "top" in one minute, it obviously cannot climb one twice as steep in the same time unless the gear is changed. A certain amount of latitude is allowed, partly because on the level or on an easy grade we do not habitually run all out, and the engine has some reserve power for use when hills are encountered, and also because the engine will give approximately its full power over a range of rates of revolution varying with the make, and not merely at one particular rate. It is not advisable to let the rate fall too low, however, or it may be impossible to speed it up by merely changing to the next lower

DON'T CLUTCH THE LEVER.

GENTLY DOES IT.



"Grasp the nettle firmly" may be good advice so far as nettles are concerned. But the clutch-



ing hand cuts no ice in gear changing. It is a matter of touch rather than brute force.



gear; as we have said, it may be necessary to change right down to the lowest speed. Each individual car may be slightly different, and it is up to each driver to find out how far he can let the "revs." fall off with safety. On tackling a long, steady gradient, with the speed indicator needle steadily receding, he will learn in time, maybe, that when the needle has dropped back to 20, if he slips down into third gear it will advance again to 30, and he will be enabled to climb the hill comfortably without a further change.

But he is afraid to change except in cases of absolute necessity, lest he should make a noise, or, missing the gear altogether, let the car run backwards down the hill. But why? It is so perfectly simple. On this page is a diagrammatic representation of the inside of a gear box. The shaft marked I. is an extension of the engine's crankshaft—we can ignore the complication of the clutch and universal joints for the moment—and carries at its end the pinion D₁. Shaft II goes direct to the bevel gear on the rear axle, with which, and with any interposed universal joints, torque

tubes and so forth we are not con-

cerned. This shaft carries the pinion

 A_1 and the pair of pinions B_1 and C_1 ,

which are free to slide backward and

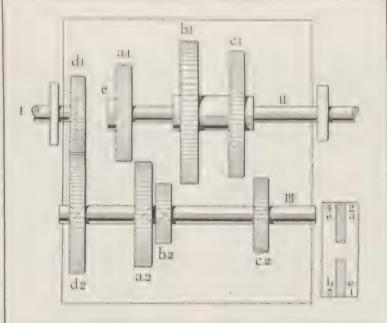
forward upon it so that they mesh

with their respective mates A2, B₂ and C₂, the position of the various pinions being controlled by the gear lever. Although they are free to slide, they cannot turn without turning the shaft. The corresponding pinions on shaft III are fixed firmly in position. These various pinions give (A) 3rd gear, (P) 1st gear, and (C) 2nd gear. top gear is obtained by sliding the gear wheel A₁ to the left, so that the two portions of the dog clutch E in the centres of the pinions D, and A, are engaged, the effect being to make shafts I and II into one solid shaft. "Neutral," of course, is obtained when the pinions are in the positions shown in the sketch, D₁ and D₂ being in permanent mesh, but ineffective so far as driving the car is concerned unless a further pair of gears is engaged. Now to change from top to third we slide the wheel A₁ to the right, disengaging the top-speed dog clutch E and meshing A1 with A2. The power is then transmitted from the engine shaft I through the wheel D₁ to D₂ and then via the shaft III through the wheel A_2 back to A_1 , shaft II, and thence to the rear axle. Shaft III has been turning at a lower rate of speed than II, and the sole difficulty facing the driver is, by speeding up his engine, to get the two pinions A, and A, revolving at as nearly as possible the same rate of speed before endeavouring to get them into mesh. If he misjudges the relative speeds the result will be that the two sets of teeth will grind together at their edges instead of slipping sweetly into engagement—a fault that can be immediately cured by either speeding up or slowing down the engine very slightly and trying again. It is at this point, of course, that the novice gets frightened, and, finding that the car is losing way, uses force—the last thing on earth that he should do. If the hill is steep enough to slow down the car materially, and he is not successful at his first attempt to change gear, it is not much use trying to force the third into engagement. It probably won't go, for one thing; and for another, most likely the speed of the car will be too slow for the engine to pick up, so that in any case he will have to get into second—which, therefore, he might as well do at once after his first failure.

Apart from the question of double-

declutching, which is more a matter for the expert, and which the learner can practise at his leisure when he is more proficient in the general handling of the car, it is usually sufficient when changing down merely to slip the clutch and move the lever through the gate as quickly as possible, keeping one's foot on the accelerator pedal meanwhile; whereas, in changing up, the clutch pedal should be fully depressed, the accelerator pedal released and a pause made in neutral before the higher gear is engaged. Cars do not vary a great deal so far as the general principles of gear changing are concerned; but the pause may be long, short, or quite unnecessary on different vehicles, and the deficiency or otherwise, or even the non-existence of the clutch stop—a brake intended to prevent the driven portion of the clutch from revolving when the clutch pedal is depressed—make a good deal of difference in the actual manner in which a change should be carried out. An experienced driver will get the "feel" of a strange car in a very few minutes; that is to say, having started off from rest, climbed up through the gate to top gear, and then perhaps had to pull up and restart in the traffic,

he will instinctively know the particular peculiarities of the car and will infallibly make perfect changes there-The novice, however, will take longer to learn even his own car; but by experimenting at various speeds on a gentle gradient he will soon tumble to the necessities of various changes. The judgment of the relative speeds of the two shafts in the gear box is a matter of instinct and "touch" rather than of mathematical knowledge, but it is a good basis to start from if one remembers to change down quickly, merely slipping the clutch and keeping the engine speed up, and to change up slowly, letting the engine slow down. The variation from this general rule in the case of any particular car will soon be learnt.



THE PART THAT MATTERS IN A GEAR BOX.

DI and 2 are the constant-mesh pinions; e the male member of the 4th gear dog clutch; aI and 2 the 3rd speed pinions; cI and 2 the 2nd gear, and bI and 2 the 1st. Alongside is a diagram of the gate. Reverse gear, for the sake of simplicity, is not shown.



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THEGREATLY IMPROVED D'EEMSTER.

Just exactly what has been done to improve the Deemster Car we do not know, beyond the fact that the coachwork and the suspension are now beyond criticism, but a recent trial run greatly impressed us with the car's sterling merits.

E have to confess to a considerable amount of surprise at the improvement ' interval between our first test and the second, which took place recently.
The Power of the engine and the general efficiency of the car left little to be desired on the first occasion, but we were a little disappointed with the suspension and with the design of the body work, especially as this affected the driving position. These two points have obviously been attended to, for now no one could desire a more comfortable car in either respect. The suspension, in fact, is how very much better than one expects in a light car; it is probably very near to being the best on the market at the present time. body work, too, is beyond criticism; it is of much better quality, so far as material is concerned—or so at least appearances lead one to believe—and in every way the Deemster is a thoroughly comfortable little car.

The capabilities of the engine so far

as speed and ability to pick up are concerned may or may not be improved; it is impossible for us to say, for we found no cause for complaint originally. The engine is the smallest four-cylinder of any standard British car, the dimensions being 62 mm: bore by 90 mm. stroke, but in judging the comparative merits of the Deemster it is not neces-'ary to take this fact into consideration. She has seemingly every bit as much power, speed and capacity of rapid acceleration as several 11.9's

that one might name, and the little motor is one of the sweetest running units that we have encountered. A point which we particularly liked was the ability of the engine to continue running steadily without danger of "petering out" at an almost unbelievably low rate of revolutions. In the absence of the bustle which usually proceeds from beneath the bonnet housing a small high-efficiency engine we more than once thought that the engine had stopped, and it was only by listening close up and very carefully that the fact that it was still running could be detected. This, it will be admitted, is quite an unusual virtue in a small car.

To return to the question of springing, the whole car is so light, or at least gives an impression of extreme lightness, that we rather dreaded having to pass over one or two stretches of very bad road which we knew awaited us. Our fears were not fulfilled, however, for the car gallantly rode the upraised tram-lines and the holes which once had

contained the London variety of cobbles-stone setts, aren't called ?-without causing the slightest discomfort. We found it possible to maintain the speed at which we had been running-somewhere between 28 and 32 miles an hour—over these bad stretches.

The makers have retained the ingenious mechanical starting apparatus which has always been a feature of the car, and while we have always held that small cars certainly do not need the complication and expense of electric starters, we are inclined to admit that the Deemster starter is an admirable compromise. It consists of a lever projecting through a slot in the floor boards between the two seats, and operating at its lower end something in the nature of a rack and pinion in the gear box. Normally the lever lies right forward and out of the way. A single sharp pull back, supposing the engine to be properly tuned up, is sufficient to start it. In the event of an accidental stoppage in traffic the mechanical starter would be

invaluable, or while awaiting a lady passenger with shopping proclivities, one would imagine that the driver would appreciate the ability to restart without leaving his seat.

Altogether, the Deemster is now an admirable little car, with so unusual a number of talking points - backed by sterling performance—that it should command a large sale among those in need of a thoroughly well-made car which is comparatively inexpensive to purchase and most economical to maintain.



An up-to-date example of the Deemster.



TWO-HUNDRED MILES LIGHT CAR RACE. THE

Preliminary Details of a Valuable and Interesting Event.

THE date of the eagerly anticipated 200-miles Light Car Race is rapidly approaching, and the preliminary work of the organisers is nearing completion. In view of the wide appeal and ever growing popularity of the types of vehicle which will race, it is anticipated that there will be a large attendance of spectators at Brooklands on October 22nd-provided, that is, that the weather is fine and everything pos-

sible has been done to make the race an attractive event from the point of view of the public. Similarly, the task of the timekeepers—no light matter with fifty - two cars traversing a 23 miles' circuit seventy-three times—has been simplified so far as possible, and it is probable that the

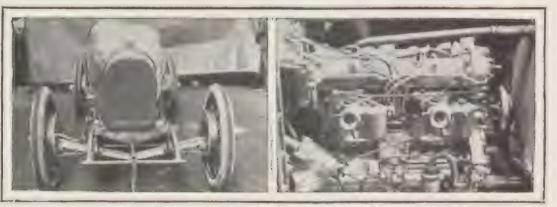
method of scoring adopted will render it easy to follow the progress of the race, or of any particular car in which the spectator is specially interested.

The cars will be lined up at the

starting point (the Fork) in four rows, the first row being despatched at 12 o'clock and the second, third and fourth rows at half-minute intervals thereafter. For 2 ft. back from the raidators, all the bonnets of the cars will be coloured to correspond with the

row in which they started-first row (numbers 1 to 16) yellow; 2nd row (numbers 20 and onwards) red; 3rd row (30 and onwards) green; and 4th row (40 and onwards) white. Thus. if two cars, one yellow and the other red are running neck-and-neck on their 15th lap, one will know instantly that actually the red car has caught up half-a-minute on the yellow car; or, if a yellow and a green car are running together on the same lap, the

green is really leading by a minute. So far as lap scoring is concerned, a huge board, 104 ft. wide, will be erected at the Fork in such a position that its information is easily legible from the Members' Hill, the Paddock and other important parts of the course. Across the top, as our diagram shows,



The 11 litre Talbot-Darracq and its engine.

ROW 4.

60. Aston Martin 3 (1496)

- 61. A.C. 4 (1496)
- 62. Horstman 3 (1498)
- 63. Silver Hawk 3 (?)
- 64. Bugatti 3 (1452) 65. Talbot-Darracq 3 (1499)
- 66. Aston Martin 4 (1496)
- 67. Horstman 4 (?)
- 68. Bugatti 4 (1452)
- 69. A.C. 5 (1496)
- (c) 70. Eric Campbell 2 (1498)
- (e) 71. Soriano Pedroso 1
 - (1098)
- (f) 72. Soriano Pedroso 2
 - (1098)
- (g) 73. Enfield-Allday 2 (1488)

(WHITE)

ROW 3.

- 40. Aston Martin (1496)
- 41. A.C. 2 (1496)
- 42. Marlborough 3 (?)
- 43. Lagonda 2 (?)
- 44. Alvis 2 (1460)
- 45. Horstman 2 (1498)
- 46. Charron-Laycock 2
- (1460)
- 47. Silver Hawk 2 (?)
- 48. Bugatti 2 (1452) 49. B.A.C. 2 (1484)
- 50. Talbot-Darracq 2
- (1.199)
- (b) 51. Eric Campbell 1 (1498)
- 52. Douglas (1222)
- (d) 53. Snow (1213)
 - 54. A.C. 3 (1496)

(GREEN)

ROW 2.

- 20. Aston Martin I (1489)
- 21. A.C. I (1496) 22. Marlborough 2 (?)
- 23. A.B.C. (1198)
- 24. Lagonda I (?)
- 25. Hillman (1496)
- 26. Alvis I (1460)
- 27. Horstman I (1498)
- 28. Enfield-Allday (1488)
- 29. Charron-Laycock I (1460)
- 30. Silver Hawk I (1498)
- 31. Bugatti 1 (1452)
- 32. B.A.C. I (1484) 33. Talbot-Darracq I
 - (1499)
- 34. Calthorpe (?)

(RED)

ROW I.

- I. Marlborough (?)
- 2. G.N. (1086) 3. A.V. (1100)
- 4. Deemster (1086)
- 5. Peugeot (?) 6. Morgan (1090)

- 7. Singer (1096) 8. Coventry Premier
 - (1055.5)
- 9. Crouch (1090) 10. Bleriot-Whippet (1096)
- 11. Gregoire I. (1089)
- 12. Temperino (1089)
- 14. Gregoire II. (1089)
- 15. Gregoire III. (1089)

(a) 16. Salmson (1097)

(YELLOW)

Cars will be started in four batches, or rows, at half-minute intervals, Row I being despatched at midday precisely. Cars in the lists above having letters before their numbers are reserves, priority being alphabetically indicated.

ELABORATE PRECAUTIONS.

the numbers of the competing cars will each occupy a 2 ft. space, the colours by a strip of the same colour above the appropriate numbers. Below each figures, from 1 to 73 on the tear-off pletes a lap, an attendant tears off the glance at the board will immediately that one needs to know.

although the race will be run as a single event, it is actually a double-barelled 1,100 c.c. cylinder capacity and up to This, however, will not complicate in the first row to be started, and those fry, need only disregard all competitors.

tors carrying yellow discs on their bonnets, or on the other hand those whose sole interest lies with the I,100 c.c. class will pay attention only to yellow cars. It is doubtful, however, whether any such hard and fast line can be drawn, for it is generally conceded that the fastest car will not necessarily win the

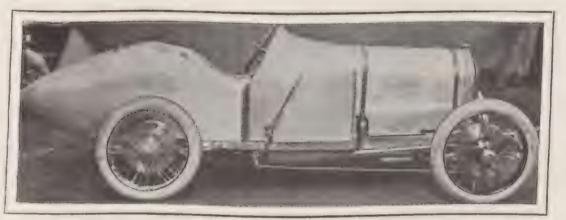
race, and it is quite within the bounds of possiblity, if not of probability, that one of the smaller cars may carry off all the honours of the day, at any rate from the point of view of the mere onlooker. Technically, presumably, it will not be possible for a 1,100 c.c. car to win the 1,500 c.c. race, even though it puts up a faster performance than any of its bigger brethren, but we anticipate that the spectators will be inclined to regard the whole event as a single race, and the first car home as the winner, no matter how clear one makes the point that cars in the first row are racing against each other only and not against the rest of the field.

The point of greatest interest will be the Fork, which will be the starting and finishing point. There will be situated not only the large public scoring board, but also, on the other side of the approach to the "finishing straight" a smaller board for the information of competitors. From the large board the existing fencing will be moved back 8 ft. over a frontage of 600 ft., where the pits will be arranged.

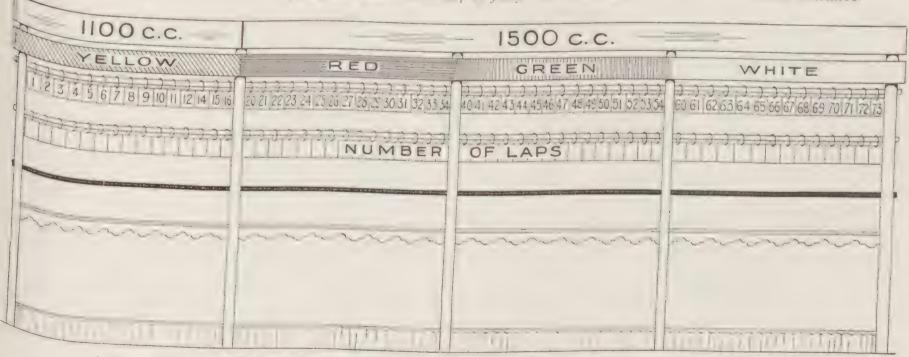
Elaborate regulations have been made to prevent even the possibility of accident through competitors who wish to put in to the pits for replenishments, tyre renewals and so forth, leaving the banking without giving due warning to the other drivers. Equally sound arrangements have also been made to signify to the drivers that they have been guilty of any breach of the regulations, and altogether the organisation of the race appears to leave nothing to be desired. It is not possible to imagine any difficulty of contingency that has not been foreseen and provided for, but it must be remembered that as this is the first

event of the kind ever held in this country, improvements for future races may suggest themselves during the progress of the meeting.

The main gates leading into the public enclosure from the Byfleet road will be closed at 11.30 a.m. Thereafter entrance can be gained at the Paddock entrance.



The little Talbot-Darracq is fully "streamlined."



A diagrammatic representation of the proposed 104 ft. scoring board. The top row of figures gives the numbers of the cars; beneath, the number of laps covered by each will be shown progressively, and beneath again, a big "R" will be hung in the case of any cars which retire from the race.



YACHTING ASHORE AND AFLOAT

By Captain P. A. Barron.

A few words of Advice, and an abridged Vocabulary that may safely be used in the Drawing-Room.

MONG the folk who go down to the sea in ships there are I many amateurs who are called yachtsmen and yachtswomen. Some are people of great distinction, but others rarely wear yachting

Yachting is a sport in which it is quite easy to excel on shore, and in the illustrated papers, which during and after the Cowes season publish photographs of toilets the most ravissantes against backgrounds of rope ladders leading from the decks of the photographers' ateliers to the head rests. Tillers and wheels are often introduced, as they are convenient pieces of furniture, and can be moved fore or aft or to port or starboard as

Some of the best rigged studios, in which many society leaders sail, have binnacles, booms that carry balloon jibs, mizzen bowsprits, and starboard lights, of which some yachtsmen and women are extremely fond. The rigging of these studios has become a very highly developed art in recent years, and has engaged the attention of many of our leading yacht designers.

Some studios are yawl rigged, and some cutter rigged, and a few of the most modern are of the new brigantinesmack type which is so fashionable. Yachtswomen should always ask how a studio is rigged before going on board, and should give the information clearly when sending their photographs to the Press. It looks so bad to have an inscription reading: "Lady Aquamarine, the keen yachtswoman, in the stateroom of her famous yawl,' when any sailor can tell that the studio is rigged in the Chippendale-Clipper

In addition to yachtsmen and yachtswomen there are a few enthusiasts who "can sail a boat," and often do so even in the depth of the Little is known British summer. about these strange folk. Most of them got horribly dirty in minesweepers, tin-fish-chasers, and disgusting little craft manned by the

R.N.V.R. during the war, and since the peace has been raging in so many parts of the world they are occasionally to be seen on board their "little They are almost indistinguishable from respectable folk when ashore. On board they hardly ever haul up rusty anchor chains when garbed in white flannels, and they more often wear sou'-westers than white-topped yachting caps. They are nasty people.

The greatest care should be exercised when yachting invitations are received. Strict enquiries should be made regarding the Club House and the lawn, and if there is any cause for suspicion that the prospective host has a boat a private detective should be employed. Most people have heard of "sea lawyers," but all may not be aware that these are members of the profession who guard their clients from the danger of being "impressed" and made to labour on yachts.

The bitter hardships of innocent people, and others in high social positions, who have been kidnapped and forced to do the most frightful toil on these craft, can hardly be believed even by those who have read stories of the early British navi-

gators and other pirates.

No one is really safe. I have seen a Peer of the Realm forced to wash plates on a small yacht manned entirely by acquaintances of the owner who have been impressed into his wicked service. These unfortunate folk, cowed by his authority, and the knowledge that a skipper has the power of life and death over his crew, have been compelled to leave their bunks in the small hours of the night, such as seven or even six o'clockand summer time at that! A common excuse given is that this is done to catch a tide. As if a tide mattered!

On some yachts there is no chef, no cocktail artist, no manicurist, and often guests find there is no bath except that provided by the sea, unto which they sometimes hurl themselves in the hope of ending

their intolerable lives. Even then the inhumanity of the skipper may not end, for he may rescue them and qualify for a life-saving medal. bitter thought has prevented many dispirited guests attempting the escape of death.

Some of the most heartless yacht owners are those who sail quite wellknown racing craft. They appear to take a fiendish pride in their deplorable hobby. The comfort of those on board is entirely subordinate to their lust for victory. To see their white craft with every sail distended, quivering like a living thing, with green water silver flecked, swirling along the lee rail; to feel the salt spray tingling on their faces; to see the shadows of clouds skimming over blue water, to watch the ever-nearing buoy that marks the turning point; to give crisp orders as the little white yacht spins round at a touch of the helm, and to see those orders obeyed more smartly than were ever the commands on a parade ground—these are things that seem to fill these strange creatures with uncanny joy.

There are other yacht owners who do not race but make long cruises in craft but little more seaworthy than those in which foolish navigators centuries ago, set out on voyages of discovery which proved that this world is a slightly misshapen globe. Some people are foolish enough to think that in them there survives a little of the spirit that won England her place as a sea-power. But the are not nice folk to know. Their yachts display no fluttering strings of vigorously tinted bunting. In their persons they are often uncouth. They are rarely seen at regattas, and have little use for yachting caps and white flannels. Often they appear on deck bare-footed, with old serge trousers rolled up to the knees, and they will support life for weeks on tinned salmon, bully beef, and other mineral products. They have an ungentlemanly know ledge of patent cooking stoves, and some of them regard a chart as having

MISUNDERSTOOD TERMS EXPLAINED.

uses other than that of enabling them to discover the name of the sandbank on which they get aground.

A few, when they leave the soft loys of taxed amusements, theatre suppers that are greatly under proof, and the haunts of extravagantly themselves and cruise for weeks together in places where there is practically no society at all except that of sea birds and other objectionable works of nature. These strange, uncivilised folk seem to regard their little cabins filled with books and than than the more desirable haunts even than those homes for heroes who find the rare and refreshing fruits of victory so—well, so rare.

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The cabin of the true yachtsman is almost Spartan in its simplicity. What the landsman would call the Walls and ceiling have few decorations except the picturesque indentations made by the foreheads of those landsmen before they learned the meaning of "head-room" on a yacht. By the beams of these fissures in the oak beams one can often estimate the

heights of the owner's friends. Often one may see a lamp swinging over a table with a dish of pineapple chunks placed beneath to catch the drops of oil. Inverses, yet in such cabins some

yachtsmen will pass the odd moments when they are relieved from toil. In their little craft they will visit strange lands and sail through weather that would make a professional sailorman go below.

Taking these facts into consideration, it is not surprising that so many people prefer yachting ashore, where more becoming clothes can be worn and greater publicity obtained. They should, however, endeavour to learn the vocabulary of the so-called sport in order that they may speak "in character" when in yachting costume. Below a few yachting terms are defined:

Boom.—This is a vast and heavy piece of timber which sweeps periodically across that portion of the deck on which visitors sit. The word is what literary people define as "onomatopoetic "-that is to say, it is derived from the sound made by the thing indicated. "Boom" represents the noise made when the timber strikes any similar material such as the head of a landsman.

A Wet Sheet and a Flowing Sea.—A poetic maritime fancy indicating bad weather. Believed to be derived from the state of the bed linen when the sea flows over the decks.

Lubber.—A friend of the Skipper.

Ballast.—A guest who is moved from port to starboard and vice versa as directed when the yacht is tacking.

Dog Watch.—That portion of the night during which the only watch is kept by a dog.

Night Watches.—Small chronometers with luminous dials. They must not be confused with "The Watch," which is that portion of the crew which sleeps

Port.—A confusing term, the meaning of which is only to be judged by the context. Most commonly used in the phrase "any port in a storm," derived from the old sea custom of serving inferior wines in bad weather when few palates can appreciate good.

Starboard Light.—A liqueur termed by the vulgar "flapper's ruin."

Mast.—The biggest piece of wood that sticks upright on a boat. "master mariner" is a mariner who climbs a mast.

Yawl.—A yacht used for yawling. Schooner.—A yacht used for schoon-

Sandbank.—Any part of the sea on which many yachts congregate.

Voyage.—The distance between one sandbank and another.

Crew.—See Crow.
Crow.—A term never used by yachtsmen.





CONCERNING INNS.

By C. S. Brooke.

An Inn-Elegy, and some reference to Inns that are not Ineligible.

HERE are folk, it is conceivable, folk being what they are, that is to say not all of them, by a long chalk such discriminating fellows as you and I—there may be folk, I say, who like snakes, whether wriggling about on their native heaths, or lying around "promiscuous like" in coils on the flat rocks with which the native heaths abound, or stuffed or pickled, or whatever it is that they do to dead snakes-I can find it in my tender, my susceptible heart to hope that it may be pickling—in order to fit them to be put in glass cases. But I, if one must tell the truth—and a little truthtelling surely cannot be taken amiss during the Parliamentary Recess, when the politicians are let loose on the country in order that they may tell something else-I, most emphatically, am not of the number of the snake's

admirers. On the contrary, in good sooth, by my halidame, and all that sort of thing, I loathe the beastly—I mean reptiliferousthings, and in saying that I am not speaking in temper nor putting too fine a point to it.

The mere thought of snakes, as of that mean little devil causes me to shudder with the sort of shudder that is sometimes diagnosed, sometimes rightly, as symp-tomatic of pneumonia. And for that reason I am with Saint Patrick as whole - heart-edly as I am against Archbishop Leighton. The one, you may remember, sent all the snakes packing from Ireland-would that one of our saints had done as much for England!whereas Archbishop Leighton, I have read, often said that if he were to choose a place to die in it should be

Now had His Grace specified the Star at Goudhurst, or the Hind a: Aldermaston, or the Baskerville Arms at Clyro on the Wye, or the Admiral Rodney at Horncastle, or the Blue Cap at Sandiway Head on the Manchester-Chester "turnpike," or the New Inn at Clapham (in Yorkshire, not the depressing if famous junction of the name), or that other New Inn at Clovelly, or the George at Chard, or the Racehorses at Kettlewell (Yorkshire again), or the inn at Wooler in far Northumberland (into which we turned one bitter January night) or

the Squirrel at Wellington (in Somer set, that county of noble church towers, not Salop, a county of old black-and-white halls and older green bills) or the Hall hills), or the Ilchester Arms at Abbotsbury in "Do'set dear"—had His Grace specified, I repeat, any one of those or a hundred and one—a hundred and two, indeed, if it comes to pinch—other inns in a great tradition, I, for one, might have been with him! As it is, the Archbishop, with his "all inn," is altogether too indefinite to suit this sheep. "An inn" might happen to prove, luck also being what it is the one with the it is, the one with the snakes, stuffed or pickled, in a glass case on a side table in the coffee-room. And, again not to speak in temper or to strain the point, I would liefer die in a ditch that under the roof that shelters such as abomination as the glass case is question and its worse than offensive zoological specific

mens.

Inns in general are not suitable places for such solemn occasions as last throes, last gasps, passing hence, shuffling off this mortal coil, or whatever you may choose to call those occasions. Many inns, indeed alas, how too many!—were in tended as, or have become, places di which, however still "within the meaning of the Act," swipes may be swigged ad nauseum, but at which no other which no other lawful "occasion" is possible, as, for instance, the partaking what a good old.



Between Land's End Hotel (shown above) and that at John o' Groat's (on the next page) there are hundreds of comfortable stopping places. Sometimes they need finding, however!

TOKAY AND TEA.

fashioned word! Let's say it again—the partaking of a cup of tea during the course of a country ramble with one's sister or one's cousin or one's aunt, or the sister, cousin or aunt of any other fellow who is entitled to plume himself on his taste in the important matter of the things—in cases uncommonly delectable, and in other cases as uncommonly startling—that in the time of our grandmothers were commonly bunched together under the term female relatives." A cup of tea at an inn in rural England at the time o' day while the sun is still high in his heaven, ever so blazing, too-why, in Practice, whatever the theory may be, one might as reasonably ask a little later in the day for a brace of partridges and a bottle of Tokay, and expect the birds to be spitted to a turn, nicely browned withal, garnished with potato soufflées without a suspicion of sadness, and accompanied by bread sauce as alluring as the bread sauce with which Robinson's landlady beguiled us—a very merry party, I do assure you—on a certain evening nine-and-twenty years ago. Robinson's landlady, was shortly after gathered to her fathers, and as she was jealous of her recipes, and had not committed them to paper, the secret of the amazing bread sauce Went with her. It is a consolation to remember, however, that the good woman did not die at "an inn." For

an inn," I take it, being inter-Preted, is just any inn-it might be a cleanly one or it might be a filthy, a slovenly or a spick - and - span, an ivied or a bald yellow brick, an inn whose landlady, it may be, is freer with the frying pan than the Dutch oven, or, it may be, is versed in the immortal book of the late Monsieur Soyer—yea, even an inn the keeper of which deems that the sign-

"The lion is strong, the cat is vicious; My ale is strong, and so are my liquors,"

serves to epitomise the whole need of man when taking his ease at his inn.

No; with His Grace's "an inn," that is to say, with inns in general; I am by no means in love. They are too common to be worshipped; and though many of them would be less unsavoury for a little incense, and ever so much less for a downright scrubbing, I, for my part, a poor man with a proud stomach, and also considering that the income tax is at the flood—such, at any rate, is one's hope, and I trust that it may not be deemed an impious hope—prefer to let the incense wait on the scrubbing. One does not love Eileen, or Vera, or Gloriana merely because she is a woman, nor is one uplifted by one's host's port for the reason that it happens to be wine, not logwood. Why, then, the very, the ever so, ever so, ever so very reverend gentleman's consummate regard for an inn " unspecified? It is a wonderful view of woody uplands, a feast of itself, even on a leaden December afternoon, that one sees from the back room of the Star at Goudhurst, and pigeon pie as conceived at the Squirrel at Wellington is famous everywhere within the circuits of the two hemispheres, or would be if fame went by merit. The one gracious thing does not, however, guarantee a something or other not less gracious at the Marquis of What-d'-ye-call-'im—I forget the nobleman's name, but it's not

Granby-at that old-world Dorset village called, not inappropriately, seeing how strong Dorset is in placenames that derive from feudal times, Sandyclaymore Parva. It does not signify, either, that at the Marquis of -as I still disremember, suppose we call the nobleman Ardnamurchan for short?—you will get such fishcakes as the landlady of the Kentish inn has the secret of conjuring. Equally would it be idle to expect pigeon pie à la Squirrel at any number of other old inns up and down England. For many of the houses that are described on the large scale maps of England as inns are found to be, when you come to know England herself, little, if at all, better than Tom and Jerry pothouses. Moreover, the longer you live, the firmer may grow your conviction that good cooks, though here and there made, even as knights and baronets are made, are usually born, and, too, like poets, all the better for it.

If it comes to that—choosing a place to die in, I mean—'pon my penny-plain soul, I had never, so far as I am aware, given the matter a thought until the Archbishop put it into my head. Death itself—who among us that ever meted out justice to a healthy appetite by means of roast pork and the usual "fixings" has not contemplated the underworld after such an adventure? I own also to having speculated that this, that,

or another place would be preferable to Burslem, or Walsall, or St. Helens as a place in which to await the Last Trump. Some of our country churchyards, with their roses, their tall friendly elms, their venerable yews, and their what-not. offer sites so eligible as to set even the least fanciful fancy straying instead of getting on with the elegy. We have one near home, only the trees, with the exception of a single yew, are beeches, not elms; and there is another even, little as you might think it, in



The Hana Hotel at John o' Groat's, a tidy step from Land's End.



Lincolnshire-Revesby, I mean; you'll remember the roses there if you discovered that pleasant place in summer. I know another, in Berkshire, a fourth, in-but, there, if one give rein to so alluring a subject as places to be buried in one may be driven, perforce, into concluding a place to die in in "our next." And that would never do; for against "our next " there will be The Show. Moreover The Show Number, it is whispered, is to be an Everso - by - Ever - so-plus- Ever-so-Subtract-Nothing Number, a number to set the town talking and the welkin ringing-a number, in fact, that shall worthily celebrate, if not the passing of Sir Eric, at any rate the End of the Great Big Slump:

And so, as to a place to die in, even were the Archbishop to cry out to me from the Shades, "Hi, mister, I'll concede you any inn you choose to name!" one might still remain unconvinced. Such a concession would relieve one of the chance that in choosing to die at "an inn" one might share the fate of Charles Villiers, second Duke of Buckingham,

who, according to Pope, died

"In the worst inn's worst room, with mat half hung, The floors of plaster and the walls of dung."

Even at that, however, I am unrepentant, and still should be were His Grace to throw in quite a respectable number of hotels-by the way, can any reader state in exact terms the difference between an inn and a (or an) hotel (or hôtel)?—as, for instance, the Royal Oak at Keswick (how capital the fare, whow modest the !bill!)



There is no need to be homeless on a night like that represented below. Accommodation will be suggested, if not provided, at the local police headquarters.



the Hafod Arms at the Devil's Bridge (what a view!), the New Inn at Gloucester (it was really new about four and a half centuries agone), the White Horse at Dorking (which Dickens ought to have made the "Marquis of Granby," but, alas! failed to do), the Royal Castle at Lynton (again, a noble view!), the Dorset Arms at East Grinstead (note well the sign-" For families and gentlemen"!), the Imperial at Barnstaple (one may feel at home there in no time, despite the high-sounding title), the Falcon at Stratford - on - Avon (kept, appropriately enough, by another Mistress Ann Page), the Central Station at Newcastle (the breakfast menu used to be as long as your arm, and included-fold your hands on your diaphragm and say a long grace-included pork chops!), the Clarendon at Oxford (shade of that once-great joke Mr. Verdant Green!), the Lion at Shrewsbury (through the archway of which, on a steepish hill, Sam Hayward "tooled" a coach for sixteen years without so little as one minor accident), the Old England at Bowness (how proper a name

for the house!), the George at Penrith (that haven from the bleak fells), the Royal at Kirkby Lonsdale, thebut, indeed, the hotels are even more intriguing than the churchyards. Yet, I say, with them thrown in, there is not one, inn or hotel, at which I would choose to die. Wherefore, My Lord Archbishop, though I would cheerfully join Your Lordship's ghost in a last bottle at that inn upon which I have often mused, 1 will not give my last kick thereat unless, willy-nilly, I must.

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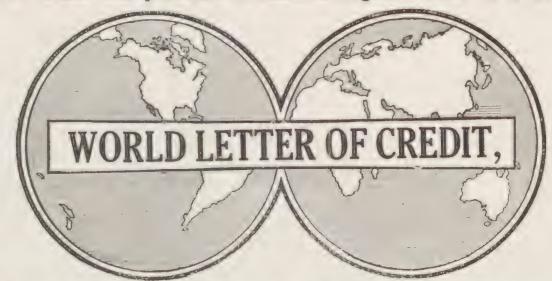
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NOTOR DWNER 41

NEW MOTOR VEHICLES FOR THE EST. ITE.

A Forecast of the Commercial Exhibition at Olympia this month.

F the motor exhibition that opens on the 14th inst. at Olympia is anything to go by, what is termed the business vehicle has become indispensable; for, in its varied developments, motor power fills the whole of the large building.

The range is considerable. Marked progress is visible in the present collection of modern aids to estate work, to farming, and to the other fields in which the horse has now become a back number. At our service are petrol, coal and electricity, harnessed, moreover, so cleverly that compactness is combined with admirable efficiency and variety.

To describe the exhibits in detail would be out of place in an article intended mainly for estate owners, and we therefore deal with those in which our readers will be most interested.

What would appear to be a well-designed shooting brake is the 12-16 Unic, which has ample accommodation for the customary number of "guns," as well as for their impedimenta. With four-cylinder monobloc engine and four forward speeds, the chassis is similar to that already in such wide use.

to that already in such wide use.

For station work various useful vehicles are shown, amongst them being the Norfolk, which is claimed to be very light and needing one man only to handle it. It is lighted by electricity, has long springs and pneumatic tyres; also windows that open and internal heating.

Amongst the larger passenger vehicles are the Maudslay single-deck omnibuses and a similar vehicle, an A.E.C., which is admirably equipped for conveying a large party in real comfort.

For the speedy carriage of light articles one has a fairly wide choice. On an Albion chassis, for example, is a 30-cwt. Robson-built body smartly finished in mahogany. Of equal capacity is the Vulcan tilt van, with hinged tailboard and a pair of doors above. For light loads the Robson van that is shown on a Ford chassis deserves consideration.

Where the approach to a farm is

difficult by reason of its gradient or bad surface the four-wheel drive proves indispensable. Several F.W.D. vehicles—which are of this type—are on view, both for passengers and for goods or merchandise or farm produce. In one case the vehicle is used as a trailer, in another as an ordinary lorry, each type having the firm's patented hydraulic tipping gear, acting in three directions and controlled from the driver's seat.

Another vehicle that discharges its load by mechanism is the 20-25 h.p. Star, on the same stand being a 30-cwt. van and a market gardener's wagon of the same capacity.

Speedy and economical delivery of farm produce and baggage and so on is provided for in vans such as the 15-cwt. Dort, of rather less than 20 h.p. For heavier weights there is wide choice; for example, the 1-ton, 3-speed Whiting, with electric lighting and starting, a 1½-tonner of the same name, and bigger vehicles such as the Federal and the Clydesdale.

The Chevrolet also is adapted for handling light loads expeditiously, and on the same stand will be seen an Oldsmobile chassis of 40 h.p., of a pattern that has given good service for heavy haulage.

Of the three Stewart commercial vehicles the 18-cwt. and the 1-ton models will probably be of most interest to our readers, the former being of 15.9 h.p., the other rated at 20 h.p. They appear well designed. A side-tipping body in one case and an end-tipping body in another is provided in the 35-40 h.p. traffic truck displayed by North-Western Motors, while other substantial vehicles are the Pagefields of 40 h.p., four speeds and worm drive.

The steel-bodied Bristol is very interesting. It has a powerful engine and deals with loads up to 4 tons, and discharges its cargo by the agency of a

hydraulic pump.
What strikes the observer at once in the Scammell is that it has six road wheels. This design appears to have

proved very satisfactory—at any rate, it has been in use for a long time—and it possesses virtues peculiarly its own, amongst them being the power to carry legally as much as $7\frac{1}{2}$ tons at 12 m.p.h.

For pumping out reservoirs and ponds and for similar purposes one of the 6-cylinder Halleys has particular merit. Its tank holds 750 gallons and is filled by a mechanically operated vacuum pump.

Leylands, whose lorries did such good service overseas during the late war, are represented by a 250-300 gallon motor fire pump, an all-the-way-round tipper of 30 h.p., and two other vehicles.

Amongst steam vehicles we find all the well-known makes. There is the Clarkson, for instance, which burns coke as fuel, with provision for falling back on oil or charcoal. The boiler is what is termed the thimble tube, with automatic control of water and draught The engine is a 2-cylinder compound and the working pressure 300 lb. per square inch.

Various types of Fodens are on view, amongst them a new development—*i.e.*, a chain-driven steam tractor, which has not yet been exhibited in London.

Another well-known steamer is the "Little Giant," which embodies several interesting improvements. Other powerful vehicles are the Sentinels, with three-load capacities and various styles of body; also the firm's patent trailer.

Ability to haul a 6-ton load up a grade of one in eight at 8 m.p.h. is claimed for the Atkinson steam wagon, also unusual simplicity and an improved engine with two horizontal double-acting cylinders. In the 4-ton Yorkshire steamers we find another example of a good style tipping wagon; it has three forward speeds.

The exhibition, which remains open till the 22nd inst., is thoroughly practical and a striking demonstration of the part that mechanical power now plays in daily life.



LAST MONTH'S SPORTING OFFER.



THE ONLY MAN WHO SO FAR HAS RESPONDED TO THE OFFER TO COME ROUND AND HANG THE STAFF—AND HIS REASON!

We made the offer last month that any reader who did not consider our October Number to be the best ever was at perfect liberty to come round and hang the Editor, Art Editor and others responsible—if he could. The slim youth depicted above blew in as a result, with a bad attack of blood lust. His complaint was that the offer was a wash-out and a frost—he never could find anything to complain about, and besides he hated waiting. Couldn't he hang somebody, then and there?

He couldn't, but we are afraid he'll be back again now the October Number is out, probably growling because it isn't the November issue, which, with all due regard to modesty, is going to create a new standard in monthly journalism—always supposing the whole staff is not lynched in the meantime. Joking apart, we mean what we say in regard to the November Show issue. Fill up one of the coupons below and make sure of your copy, or you'll be sorry, for we anticipate a big demand.

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THE WASTE OF OIL.

Lubricating oil consumption, because it is so very much lower per mile than that of petrol, is not given the attention that it merits. But lubrication is a vital matter on the one hand, and, on the other, even small extravagances reach astonishing totals in a year.

E are very keen on getting the last possible mile out of each gallon of fuel that goes into our tanks, but how often does anyone stop to think about oil economy? Just because lubricating oil gives an enormously greater mileage per gallon than petrol the necessity is not so pressing, but the normal average wastage of oil is far greater proportionately than that of petrol on the most extravagant car that was ever built. If one reckoned merely in percentages, the consumption of oil in comparison with the work it does would be enormous; but as one travels thirty, forty or more times farther than on a gallon of petrol the expense is comparatively insignificant.

The little things count, however, in motoring as in everything else, but beyond avoiding obvious waste it is difficult to know what one can do. Oil is in an altogether different category from petrol. The latter is, or should be, consumed completely,

and a fresh supply is not vitiated with a lifeless residue. You pour two gallons into an empty tank, and the car will travel just as far as two gallons is good for. When that is done, and you pour another like quantity, the car is again capable of covering a similar distance. Not so with oil. The base chamber and sump are emptied, swilled out with paraffin and drained, and a complete refil of fresh oil is poured in. Who can say how far the car will travel without further sup-Proper periodical attention is given in the way of keeping the oil level indicator up to the mark, and a month or so lateron a wet Saturday, perhaps—it occurs to one that the crank chamber might be washed out with paraffin again.

One need scarcely remark that it would be folly to run out the used oil to waste, since obviously it should be collected and used for general lubricating purposes about

the car—and the domestic lawn mower, roller, etc., for that matter—but the real trouble is that no one can tell the car owner whether that oil has any enginelubricating potentiality left, and, if so, how much. No one, in fact, knows the precise moment at which it is no longer safe to continue to run on the existing oil in the base chamber; no one knows, therefore, how many miles-per-gallon are wasted for the sake of mechanical safety at each refil. An analyst could tell one, perhaps; but his knowledge is not an item in the mental equipment of the normal car owner! Since one has to choose between running the car until the behaviour of the engine indicates the need for fresh oil, and filling up before that necessity is apparent, the latter alternative is obviously the only possible one. And, as a matter of conjecture, if not of fact, one would be inclined to say that of all the oil purchased by motorists in this country, a good 20 per cent. is wasted.



A sensible oil can has been put upon the market by the Prices' Company, having a detachable spout, air relief valve and dust cover.

One does not care to raise difficulties without suggesting a means of overcoming them, but is there a remedy in this case? Given the knowledge in the first place of the approximate reasonable consumption of oil of any particular car, something might be done, but the average owner will have to throw over his usual happy-go-lucky methods of car accountancy and keep a careful record of dates of refill and miles' or hours'—preferably the latter—run. If allowance is then made for any unusually strenuous work, such as a few laps at Brooklands or a Tyrolean tour, something approaching a reasonable and safe oil consumption might be reached.

In addition to the haphazard methods of use in this respect, however, there are other and far more reprehensible sources of waste that are only too common. Go into any garage, and what does one see? Why, dark splotches of old oil puddles and pools

of fresh drippings, if the management is slovenly; large sand-filled trays to catch the waste and save the floor if it is more careful.

Obviously, oil should not be allowed to drain away from engines and gearboxes in this fashion: glands and bearings should be attended to. In the case of a car kept in the owner's own motorhouse, oil-drippings should be caught in a clean tray, rather than in one filled with sand, so that the oil may be further used for some purpose, until it is convenient to give the car the necessary attention. Then, again, crude methods of filling are usually employed, with the frequent result that a considerable amount of oil, instead of running into the engine sump, is spilled on the outside of the base chamber, whence it adds to the general mess in the undertray—the place where lost nuts and dropped spanners go to!

MY LOG BOOK.

By Hermes.

Falling Prices in the Fading Year.

A the motor kalendar we are now in sight of the obsequies of a twelvemonth upon which we are glad to trample a sod. It has been a year in which few people were happier than they ought to have been, and in which quite a lot found themselves a good deal poorer. The motor industry is a particularly sensitive barometer. To some folk the motorcar is just a luxury, and a temporary financial depression inflates the "cars for sale" columns. But a glimpse of the peace-prosperity promised us so glibly from Downing Street sends the world and his wife hot foot to the motor show.

Which is as it should be. For if we have little more to spend what matter when money goes farther? I have wearied my single-nibbed pen in Joyous enumeration of falling prices. And still they come! Good cars—each of them the best car—are coyly placing themselves within our grasp. Is not the Bianchi a poem in metal? Do you not find sterling merit in the Hillman? And is not the Rover a household word? Pretty useful adjectives these, and the more welcome because in each case their subjects are now the nearer by

THE AIR-COOLED A.B.C.

The A.B.C. car has many points to recommend it that are not usually found in the small-powered, inexpensive car. In the first place it has an excellent appearance, and is not immediately distinguishable either as an air-cooled vehicle or as anything but a standard light car with somewhat sporting lines. The two-cylinder air-cooled engine that will run as silently and smoothly as a Rolls-Royce has yet to be built; nevertheless, it is not difficult to imagine when handling the A.B.C. that one is driving a good water-cooled "four." The engine-quiet and steady, as we have said—is full of life and capable of "revving" up to an altogether surprising speed, while it will hold its pace without the necessity for a gear-change on most main road hills. The control, apart from the gear-changing, which is slightly unorthodox, is light and simple, and naturally the car is economical to run. Taken altogether, the A.B.C. takes a high place among the better class of British cars of its type.

motor trade does not boom after Olympia it won't be the manufacturers' fault.

And here is another tribute to the maker. For the greater convenience of their clients—these are the firm's own words—the Darracq Motor Engineering Co. are removing their repair works and spare parts depot from Fulham to The Vale, at Acton. You will find them at No. 177, in premises more adapted to their expanding business. At Fulham, however, the distribution and sale of new Talbot-Darracqs, as well as bodybuilding, will be carried on as before, or rather on a scale commensurate with the growing demand.

I am informed that the third annual dinner of the Reception and Training Area (Grove Park) Dinner Club will be held at the Trocadero Restaurant, London, at 7 p.m., on Thursday, November 10th. Officers and exofficers who served in the Area for six months or over are eligible for membership. Members wishing for information, or those desirous of joining the Club, should apply to the Hon. Sec., Capt. R. F. Barraclough, 27 Hayes Road, Bromley, Kent. No applications will be considered after the 27th inst.





of hosts of things for which we ought to be thankful. If you want to cross the Firth of Forth your car will now go for half price. If you want to know what motorists are joining you will find the indicating finger of the A.A. leaving 160,000 in its rear. And if, now that D.O.R.A. is happily deceased, you want to go back to the old lightingup times-don't. If you want to know why, you must make yourself aware of certain awkward little by-laws and of an enactment with a stupendously cumbrous title, which defeats-under penalty, of course!-vour natural harking back to the good old days.

From Pall Mall comes information of many and divers hues. There is, for example, news of an official R.A.C. test of a car's fuel consumption. All the fifteen cars were A.C.'s—not royal, yet!—though they deserve a reward, seeing that they ran 59.4, 59.9 and 60.75 miles on a single gallon each. True there was an obverse to the shield, since one car managed to extract no more than 31.8 m.p.h. But the test just shows how economical motoring can be.

Still another motoring organisation has something of interest for us. The S.M.M.T., which organises our motor shows—amongst them the commercial vehicle exhibition this month, dealt with on another page—sends advance news respecting its marine motor show. This year it takes place in the White City conjointly with the car exhibition, which is an offshoot of Olympia. And quite a good plan, for I find that the average man is woefully hazy about motor boats, and now that these two

THE WAVERLEY CAR.

Although people are ratier apt to class the Waverley car with the considerable batch of vehicles that have made their appearance since the war, this make is of much older standing, and -if one may say so without casting the slightest reflection upon younger firms and their products-has long proved itself to be of sound design and construction. The Waverley is of orthodox construction throughout with the sole exception of the rear springs, which are best described as dual quarter-elliptics. Whatever may lie in the makers' claim that these springs take all torque, braking and driving stresses without the freedom of their action being hampered, one thing is certain: that they give a very high degree of riding comfort. The engine is a four-cylinder, of 76 mm. bore and 127 mm. stroke, giving an R.A.C. and Treasury rating of 14.4 h.p. Owing to the special attention which has been given to the balancing of the crankshaft, it is a particularly sweet-running engine, having plenty of life and power. The Waverley car strikes a very happy note in providing ample and comfortable passenger-carrying capacity with economical running. The standard five-seater, although a quite impressive car so far as appearance is concerned, is far from heavy, with advantageous results in the matter of tyre and fuel economy, and—a point of great importance to the owner-driver—the whole layout has obviously been made with a view to convenience of adjustment and accessibility.

great branches of the automobile trade are housed together he must be dull indeed if he does not pick up some information about marine motoring.

Until I read what Mr. B. Mathews has to say in the last issue of Outward Bound I never realised the extent to which motoring has penetrated the Far East. We are all aware, of course, that our leading cars are in wide demand in India, but this author describes in racy, entertaining style how the native transport of places such as Japan, Papua, Malay and the islands of the Pacific is now replaced by the car, the motor cycle and the motor boat. And with them have come fine wide roads and pleasurable travelling, opening up to visitors districts that only the hardy explorer dare have attempted. And this rapid development offers our traders immense scope, provided we are wise enough to adapt our wares to eastern conditions.

Amongst the improvements in the new model of the Wolseley-Stellite are electric lighting and a double screen. No self-starter is thought necessary with an engine so easy to swing. The price is £475. By the way, I hear that during, the recent Cowes Week H.M. the Queen travelled a good deal in the Isle of Wight in a six-cylinder Wolseley landaulette, of which she spoke very appreciatively.

Austins are introducing a neat cover for the tonneau of their "Twenty," which protects the unoccupied seats from dust and rain. It costs four guineas, and a small charge is made for fitting.





FIGURES AND FANCIES.

If the motor vehicles owned and driven in Great Britain were formed up in a single line, nose to tail, they would require a road at least one thousand six hundred and eighteen miles long to accommodate them. And if the drivers were told to "move on, please," it would take the procession one year, nine months, four days, twenty-three hours and forty minutes to pass an individual bystander.

THE average man is apt to find figures boring. Does this tedium arise because we have too much of them? It may well be, seeing that we live in a world of numbers. Everything you gaze at marshals itself into units, into platoons, and occasionally into myriads. And something of the same sort might be said of the other senses also, the sum of the whole thing being that, from the tiny blue-ribboned cradle that receives us at one end of our existence to its less acceptable but more durable final depository, our consciousness is everywhere attacked by figures.

It is not my intention at the moment to discuss any kind of figures other than certain relating to motoring. I feel, it is true, in my fingers an itch to encoffin in ink the totals of, say, unhappy war marriages. If ever numerals speak, they do, and it needs but little imagination, psychology and so forth to visualise the dramas that lie

behind them.

Ah! now I have given away the key-note. The word "drama" provides the exact clue to the interest latent in figures and totals. For numerals represent action, colour, result, the very things, mark you, that paint in the rainbows and storms of our own existence.

Figures are indeed peculiar. If I write down four-thus, "4"-I but set your eye to a telescope, to a microscope, to the mind of a Senior Wrangler. For though the figure four is as short as any sound your practised lips can produce it is none so simple for all that. That figure has its own individual position in the numerical calendar, it is the square of one number yet the square root of another. may obtain it, again, by multiplying a series of numbers, whole or fractional; equally it appears in the quotient of a dozen other computations. It is simply irrepressible—lurking in some guise throughout the whole tally of Roman or Arabic numerals.

So, now, respect tinges our boredom, and we approach with interest any

number you may select. Let me select one, the one I have had at the back of my head. It is 853,900.

What is this goodly array? Persons, with their infinite variety of thought, emotions and ways? Nosomething far more important, as our gentle Army used not so long ago softly to inform us. No-oh, no! Nothing so cheap as human beings,

but machines—motor vehicles.
Try to visualise the background to that figure. I doubt if you can adequately grasp it—I don't pretend to. Explorers tell us there are certain primitive folk who are unable to comprehend totals beyond those of their fingers. It does not need such sapient gentlemen to assure me there are also people who become bewildered after computing a few hundreds. No doubt we, readers of this journal, are on a higher plane, but to how many of us is the inner meaning of one hundred thousand anything but a grey

We call "four" by that term because it is four—or we say it is. Yet it is not necessarily—we might with equal reason have labelled it five, or any other term. The French have quite a different word, the Germans another, while still others were employed by the ancient Greeks. Such nomenclature is a matter of convention just as we agree that a pound sterling shall carry a standard yet hypothetical value.

So with 853,900. You and I would read off that figure alike, but as to its force to each of us there is no guide. But take it step by step, for it is pregnant with interest, seeing that it is the number of motor vehicles in our own country.

Put your telescope to it and it looms large. For we have only forty-five million people to use them-and of these some are infants, some out-ofworks, and some journalists like Omitting these ineligibles we find nearly a million motor vehicles distributed amongst x million persons,

enviable folk, or one, shall we say, to our old friend four?

Try now a glance from another perspective. In that go-ahead land that supplied us so copiously a year or so back with stuff labelled beef, which we ate at howitzer speed out of receptacles that became an eye-sore, there are no less than nine and a quarter million automobiles. figure makes ours look small-but, of course, in the U.S.A. every tenth man is a millionaire, or says he is. The other nine are employees at places like the Ford Works. Therefore we may rule America out.

And, anyhow, we have quite enough to tackle in our own total. Imagine these 853,900 vehicles—motor cars, motor cycles, lorries, motor coaches and taxis-we take no account of the tramcars—passing us at the rate of one a minute. While you breakfast thirty have gone by. By lunch time, two hundred and seventy are displaying their rear numbers. Twice that total raises the dust in your face by the time the theatres empty. Between that hour and breakfast the following day another five hundred have flitted by. There are still 838,500 left!

We go for a month's holiday and return to find nearly 800,000 still waiting their turn! Let us skip a weary year, a year in which every individual minute, day and night, sees a motor vehicle hasten past, leaving nearly 265,000 to come. Phew! It reminds me of those interminable locusts of the fable—" And another locust came . . . and another locust

By this time we ought to be gaining some little idea of the meaning of the

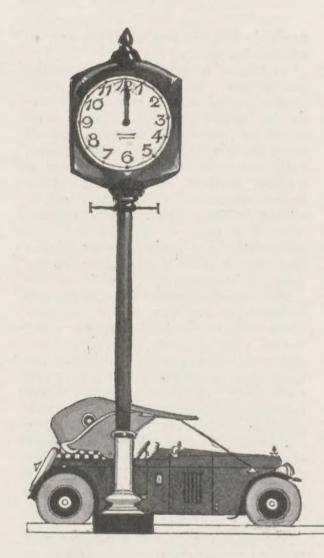
number we are discussing.

And even its side-lights are interesting. Think of the birth-places of all these motor vehicles. Many of our manufacturers want several acres apiece to turn round in, for they must keep in stock large quantities of material; they employ many hundreds of expensive machines, each of which needs room, power and attendance.



THE ROADS IN OCTOBER.

In a monthly journal it is not always possible to be absolutely up to date with road information. The information given below, however, is supplied by the Roads Department of the Automobile Association, and is not only authentic but, being in some cases anticipatory, may be taken generally as indicating local conditions on the first of the month.



THE following road information is compiled from reports received by the Automobile Association and Motor Union:—

The Bath road, with the exception of a few poor stretches between Colnbrook and Maidenhead, is good to Hungerford.

Repairs are in hand at the following points on the Brighton road, which has a generally fair surface:—Banstead to Kingswood, County Oak to Crawley and Bolney to Hickstead.

Rollers are working at the southern approach to Fenny Stratford on the Coventry road, the surface of which is otherwise good, except for the stretch between Towcester and Weedon.

Full width repairs are in hand on the Eastbourne road between the Green and Sand Pits at Godstone. To avoid take Tilburstow Hill to Blindley Heath. Full width tarmac is being laid at Felbridge, and repairs are still in hand between Polegate and Eastbourne where reinforced concrete is being laid at Willingdon. Motorists are advised to proceed to Eastbourne via Hailsham, Stony Cross and Friday Street.

The general conditions on the Folke-

stone road and in the Canterbury district are fair, whilst the Great North road is in quite good order except for the poor stretch between Alconbury and Stilton.

Caution is advised through Robertsbridge on the Hastings road on which repairs are being carried out at Riverhill, Tonbridge and Lamberhurst. Special caution advised through Green Street Green.

The surface of the Oxford road is good from London to Ealing, poor to Uxbridge, good to Loudwater, poor to Stokenchurch, where repairs are in hand; the remainder being good. Caution is advised at Dashwoods and Aston Rowant Hills

The Portsmouth road is generally good, but a poor surface through Witley Camp and approaching Liphook. Caution advised from Waterlooville onwards. Repairs are in hand one mile west of Farnham. Tickners Bridge on the Guildford-Horsham road is dangerous for heavy vehicles and is only open to heavy traffic at driver's risk. Alternative via Shalford Railway crossing then left through Wonersh and Cranleigh.

THE MOTOR-OWNER LIGHTING-UP TABLE.

Lighting-up time, anticipating that we shall then have reverted to actual solar time, is 6.08 p.m. in London on October 1st and 5.03 p.m. on November 1st. Variations in other parts of the country on those dates are given below.

BRISTOL	 6.18	5.13	EXETER		6.23	5.19	MANCHESTER	6.16	5.06
BIRMINGHAM	 6.14	5.08	FALMOUTH		6.29	5.26	NEWCASTLE	 6.12	4.58
CARLISLE	 6.18	5.04	GLASGOW	* *	6.22	5.06	NORWICH	 6.02	4.56
CARNARVON	 6.24	5.16	INVERNESS		6.21	5.01	OXFORD	 6.13	5.07
DERBY	 6.13	5.05	JOHN O' GROAT	S	6.15	4.52	PLYMOUTH	 6.26	5.22
EDINBURGH	 6.18	5.02	LEEDS		6.13	5.03	PORTSMOUTH	 6.12	5.08

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